



**LIGHTING ACADEMY** PRO TIPS  
TO CONQUER HARSH LIGHT

**HEYBROOK BAY** ONE READER'S TOP SPOT  
FOR GREAT SCENICS



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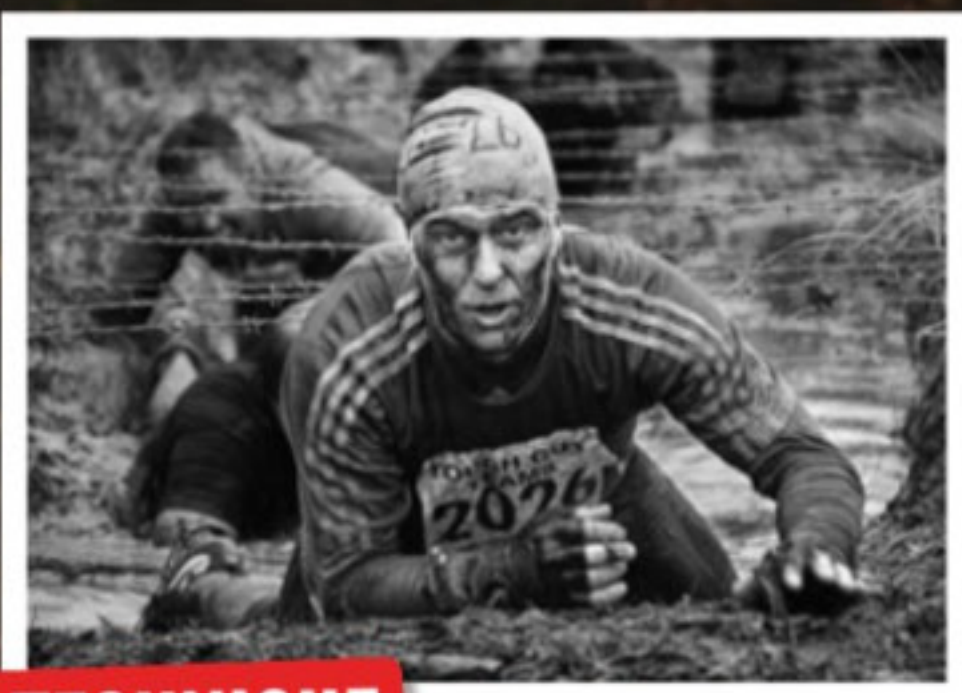
# Advanced PHOTOGRAPHER



**FULL TEST**

## NIKON Df

Our verdict on this full-frame, retro look DSLR



**TECHNIQUE**

## Winter sports

Get out this weekend for action-packed shots



WWW.ADVANCEDPHOTOGRAPHER.CO.UK  
ISSUE 40

# MAGIC LIGHT!

Wizard tricks and tips for night images with sparkle



### GROUP TEST, PART 2 70-300MM ZOOMS

Great value telezooms from Sigma and Tamron tested

### FULL TEST SONY ALPHA 7

A game changer? Full-frame in a tiny body at a budget price





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# Welcome



## WILL CHEUNG FRPS, EDITOR

Will has worked in photo mags for over 25 years and been taking pictures for even longer. His photographic interests are very broad, from nature to portraits

Happy 2014, may it be a brilliant year for you and your photography.

Inevitably, as a new year starts, our thoughts turn to what the year might bring us. I gave up making resolutions years ago, but I still make promises to myself: the usual one is to take more photographs. Or more accurately, take more better photographs.

Our new portfolios are certainly inspiring and very different too. Gareth Brooks is a bit of a dab hand at painting with light and if you've fancied a go but never known quite how to start, then read his portfolio.

If all the festive excess has impacted on your waistline, why don't you try an Iron Man? No, I don't mean actually doing it, but going along with a camera and photographing it. As John Powell's pictures show you can get some brilliant results as the participants go to hell and back.

In Photo Kit, we have a treat for you in the form of no fewer than two full-frame DSLR tests featuring the Nikon Df and the Sony A7. Both have great selling points, the Nikon a retro look and the tried-and-tested D4 sensor, while the Sony is a tiny camera packing a full-frame punch – it's a potential game changer.

See you for next month's fun with a camera.

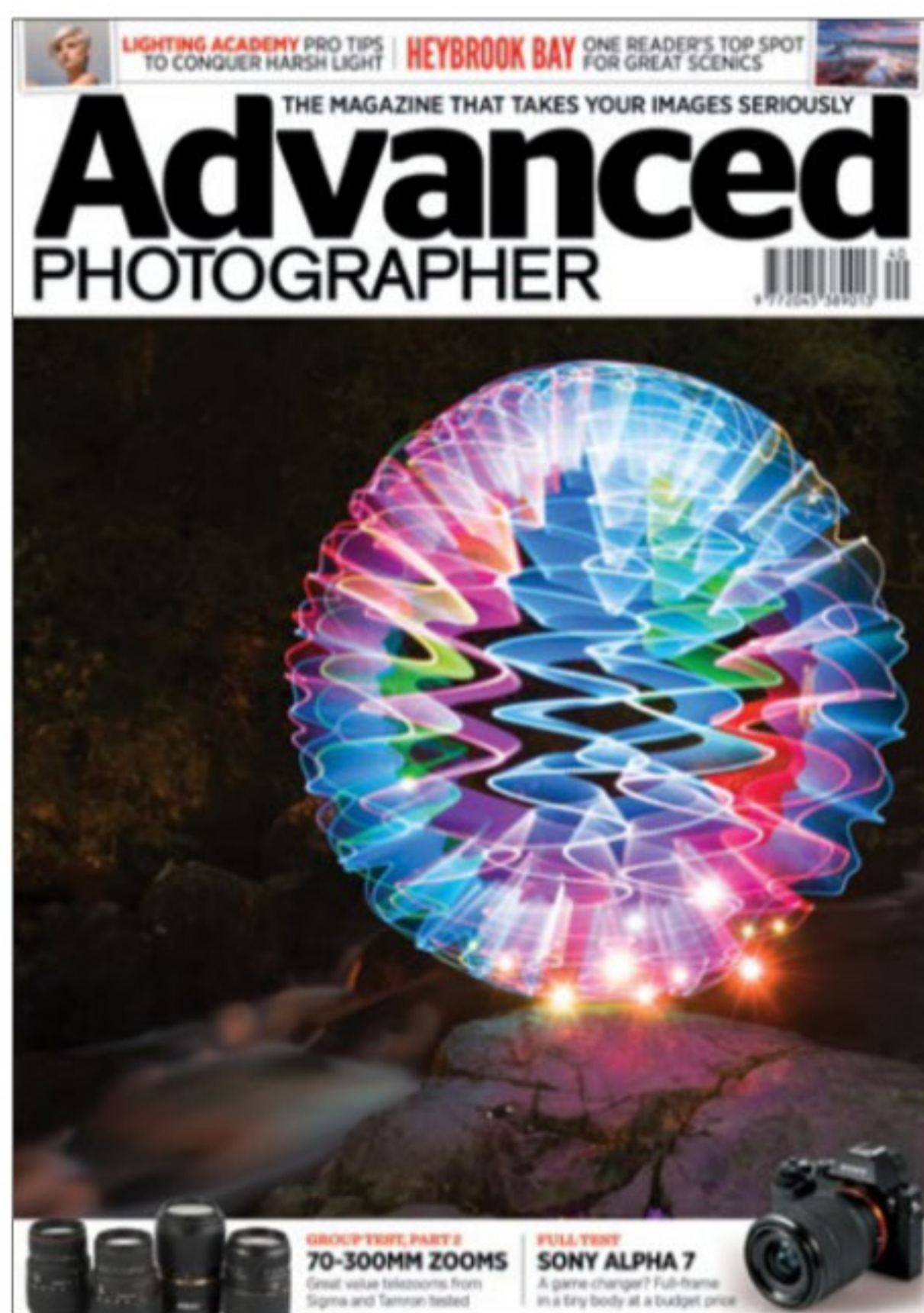
*Will Cheung*  
Will Cheung FRPS, Editor

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## The cover story...

Gareth Brooks is a whizz at light painting, as you can see from his cover image. "I had been taking photos around Snowdonia earlier, but I didn't get the photo I was hoping for. On my way back home, I passed through the beautiful village of Betws-y-Coed. Usually a very busy location, I deliberately decided to wait until it was late enough for nobody to be around. I used the LED Lenser X21R torch to light up the waterfall and the rocks. The small stars are from different coloured gels over a smaller torch."

*Nikon D90, 18-105mm f/3.5-5.6 lens, 232secs at f/7.1, ISO 125*

[WWW.FLICKR.COM/PHOTOS/GARETHBROOKS](http://WWW.FLICKR.COM/PHOTOS/GARETHBROOKS)

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Get down & dirty

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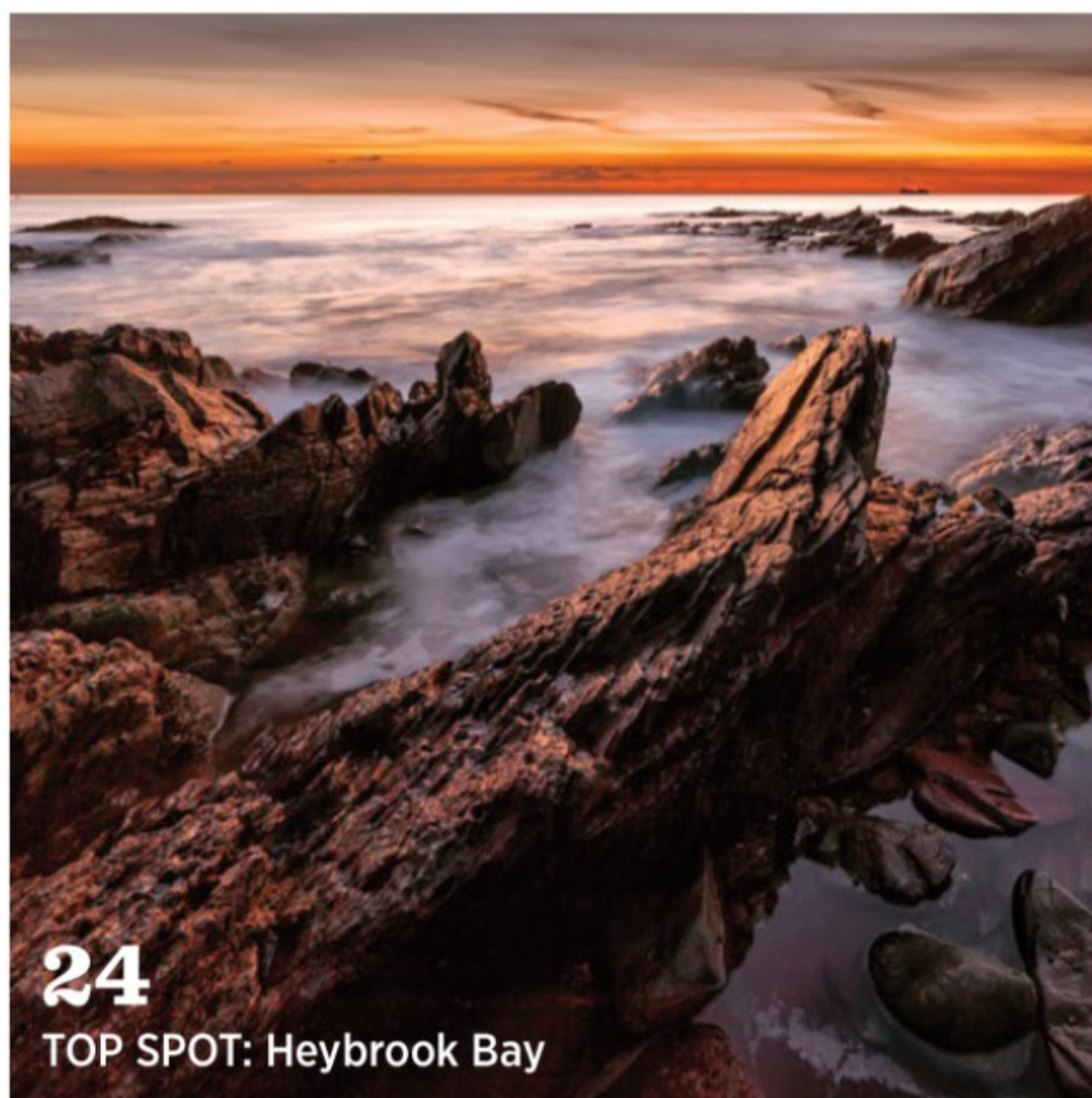


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**Want to read Advanced Photographer on your iPad?**

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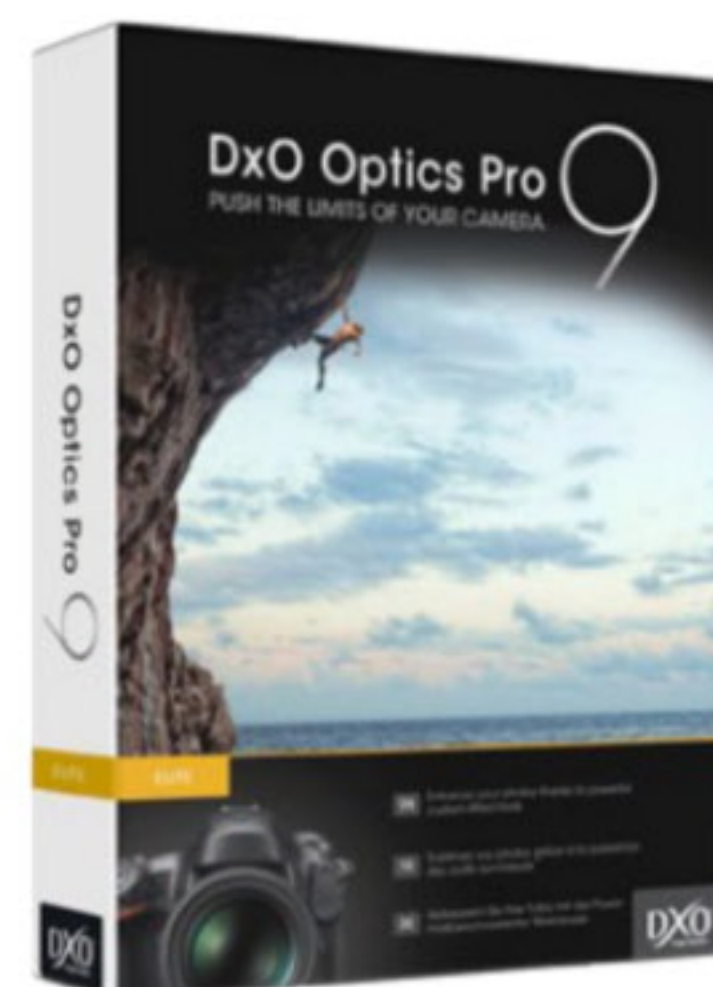


## Photo Kit: the latest gear tested

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**73 TELEZOOM LENSES** How do these four third-party optics measure up? For value for money, each rates really highly, but which one emerges triumphant in our review?

**82 NIKON DF** Offering an interesting mix of retro styling and bang up-to-date technology, the Nikon Df certainly poses a conundrum for tech writer Ian: whether to follow his head or his heart.



**90 DXO PRO V9** Autocorrection of distortion and lens aberrations plus amazing noise reduction skills could make this software your best friend.



# New Samyang wide-angle

Samyang has unveiled a new version of its 10mm f/2.8 ED AS NCS CS lens. It's the first Samyang lens to feature a new Nano Coating System that reduces reflections more effectively than the old UMC system, and benefits include better light transmission and higher contrast. The optical design includes two aspherical elements and one of extra-low dispersion glass to minimise aberrations. The new design also includes an embedded lens hood for a more compact size and a reduction in weight for the Canon version.

The new 10mm lens will be available from the end of January 2014 at a price of £470 for the Nikon version and £430 for other fittings.



WWW.INTRO2020.CO.UK

## EYE-FI FOR MOBILE

Eye-Fi's new Mobi card lets you transfer images from your camera directly to your smartphone or tablet even if your camera doesn't have Wi-Fi. Using the iOS or Android app, you can pair the card with a device, and transfer

images as they're taken. This lets you upload your photos online straight after capture, or you can use your mobile device to back up your images. The Mobi card comes in 8GB, 16GB and 32GB, priced at £42, £52 and £72.



WWW.EYEFI.COM

## NEW FROM BENRO

Benro has new additions to its Classic tripod range, and a new range of shoulder bags.

The two new tripods offer larger sizes in the Classic Series with a maximum height of 195.5cm. The 3570F and 4570F are both available in aluminium,

priced at £155 and £179, or carbon fibre at £354 and £431. The new Smart Series Shoulder Bags feature an ergonomic shoulder strap. The largest holds up to one camera body with three lenses, a flash and a 12-inch laptop. Prices range from £35 to £48.



WWW.KENRO.CO.UK

## The Photography Show

1-4 MARCH 2014  
THE NEC, BIRMINGHAM

Magnum Photos, the world's most prestigious photography agency, has teamed up with The Photography Show to produce a new competition, 30 Under 30 – identifying some of the world's best emerging documentary photographers. The opportunity is supported by IdeasTap, the platform for young artists.



The competition will recognise new photographic talent, and provide exposure to emerging photographers to a wider network of industry professionals. It will engage with an audience of young individuals looking to further develop their career in photography.

Fiona Rogers, cultural & education manager at Magnum Photos says, "Magnum Photos is excited to be partnering with The Photography Show to identify the rising photographic stars of tomorrow. Magnum is committed to supporting the next generation of documentary image makers, and this competition provides a perfect balance of exposure and opportunity for young photographers."

The Photography Show is also delighted to announce that portrait photography legend Terry O'Neill will be joining the Super Stage line. O'Neill will appear at the event on Tuesday 4 March presenting his most famous images and revealing the stories behind them. From the Rolling Stones to The Beatles, Terry O'Neill has captured some iconic figures and the essence of the swinging sixties. He joins fashion photographer Rankin, world-renowned documentary photographer Steve McCurry and celebrated photojournalist Joe McNally.

→ To book tickets and to view the full programme visit the show website [photographyshow.com](http://photographyshow.com).





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## New iPad photo title is Absolute-ly fabulous

*Advanced Photographer* has an innovative new sister title designed exclusively for the iPad. Available monthly, *Absolute Photo* is aimed at photographers who know their apertures from their elbows and are keen to learn advanced techniques, read in-depth kit reviews and see some stunning imagery drawn from the four corners of the globe.

Packed with informative features and high-quality imagery, the digital title also makes the most of the iPad's functionality to really bring photography to life. As well as tapping, pinching, zooming and scrolling through content, each issue also comes with at least 30 minutes of high-quality video featuring on-location guides with professional photographers, software tutorials and field tests, plus audio clips



where photographers talk through their images, techniques and equipment.

"Most magazines on the Apple Newsstand start life as a printed publication, which means they're restricted in terms of the content that can be created," said Roger Payne, editorial director. "When we created *Absolute Photo*, none of those paper-based restrictions applied so we could set about producing a truly interactive reading experience. As a result, *Absolute Photo* is the most refreshing, exciting and innovative photography title to hit the market in years."

The launch issue went on sale shortly before Christmas and includes a major technique feature on capturing low-light landscapes, a video field test of long exposure ND filters, Photoshop and Lightroom tutorials, plus an interview with one of the rising stars of the fashion photography industry. It costs £3.99 for a single issue, £2.99 per month for a rolling monthly subscription and £24.99 for a 12-month subscription.

VISIT [WWW.ABSOLUTEPHOTO.COM](http://WWW.ABSOLUTEPHOTO.COM) OR SEARCH FOR 'ABSOLUTE PHOTO' ON THE APPLE NEWSSTAND.



## Strobies One Eighty

Interfit has announced the release of the Strobies Pro-Flash One Eighty, a high-powered, portable flash unit. With a power output of 180Ws, it includes high-speed sync for use with shutter speeds down to 1/8000sec and full manual control. It can be used on- or off-camera, and the radio trigger set allows control from up to 50 metres away on 16 channels. The price for a flash head and battery kit is £350.

[WWW.INTERFITPHOTOGRAPHIC.COM](http://WWW.INTERFITPHOTOGRAPHIC.COM)

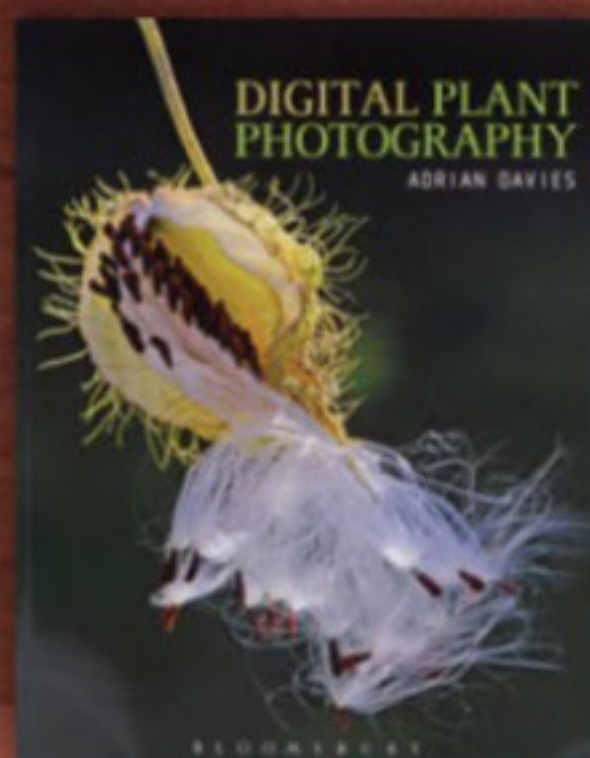
## Prints aid typhoon victims

Typhoon Haiyan might have struck the Philippines two months ago but help is still needed.

Photographer Neil Buchan-Grant has organised a group of photographers to sell their prints with all proceeds going to the DEC Typhoon Appeal. Do your bit by buying a print or offer your own prints for sale. Check out the website for details.

[PRINTSFORPHIL.TUMBLR.COM](http://PRINTSFORPHIL.TUMBLR.COM)

## Book reviews BY WILL CHEUNG

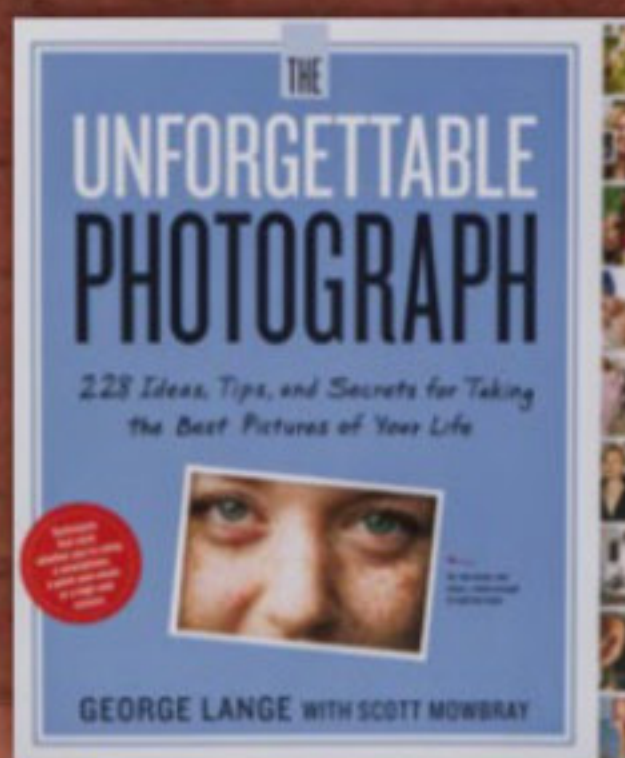


### Digital Plant Photography

ADRIAN DAVIES

Newcomers to the subject will gain a lot from this informative book. It takes you on a logical journey starting at the kit needed through to core camera and editing techniques and ending at case studies and dealing with specific subjects. More advanced techniques such as focus stacking, HDR and panoramic photography are discussed too. Presentation is good and very reader friendly. The photographs are illustrative and make their points rather well, but it's not overly inspirational.

£19.99 ISBN 978-1-4081-7129-5

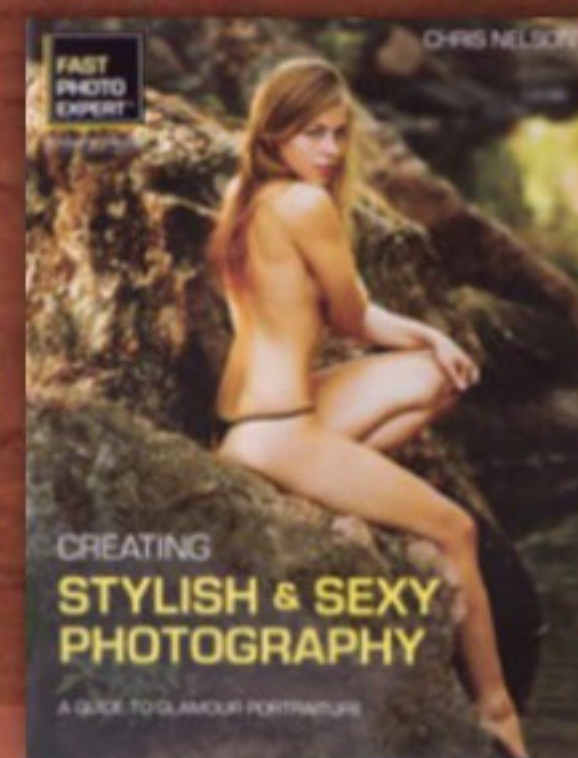


### The Unforgettable Photograph

GEORGE LANGE

The title's supporting tagline of '228 ideas, tips, and secrets for taking the best pictures of your life' explains the book's contents very well. The images in this book won't wow or inspire you, but the ideas behind them might get you thinking. It is, put simply, all about how to take great snapshots by interacting with the subject and making the most of the moment or situation. There's very little camera technique but plenty about seeing a picture in any subject, and for that it's worth considering.

£11.99 ISBN 978-0-7611-6923-9



### Creating Stylish & Sexy Photography

CHRIS NELSON

The Amherst Media sausage factory seems constantly in full production and I've reviewed several in the past year or so. Sadly, I've always been underwhelmed and this one falls into the same category. To be fair the technique advice is sound enough but in some areas it's very superficial – conversely, that could mean easily digestible. But as usual the quality of the pictures (of some gorgeous models) is poor and there's nothing here worth more than a cursory glance.

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*Light painter and long-exposure expert Gareth Brooks is a web designer and dad by day, but a creator of otherworldly landscapes by night – and he does it all armed with nothing more than a few torches*

---

**WORDS** CHARLOTTE GRIFFITHS  
**PICTURES** GARETH BROOKS

**PAC-MAN** "The moon was playing hide and seek on this shot. Just as I was writing with my torch, the moon popped out again. I've never written backwards so fast in my life."

*Nikon D90, Nikon 18-105mm f/3.5-5.6, 180secs at f/7.1, ISO 100*



**WWW.PDFMAGAZINES.ORG**



**“I love lights – I see them as paintbrushes for me to paint the dark sky like a canvas. I went to Blackpool illuminations and got more light-up toys than my son!”**

Like most of us, Gareth Brooks has always loved photography, getting his first camera at the tender age of ten. Now 34 and married with a five-year-old son (who also loves cameras) Gareth is based in North Wales – perfect for landscapes and shooting stars. Besides his photography, Gareth works as a web designer and developer and spends all his free time with his son. “Then while he’s asleep, I go out with my camera into the night,” he says.

A self-taught photographer, Gareth first discovered light painting while taking photos of the moon. “I moved the camera accidentally and noticed a streak of light,” he explains, “and it took me a few seconds to work out what had happened after viewing the image. From there, I started drawing shapes and writing with torches, then playing with LEDs and light-up gadgets. There’s just something magical about it. When you plan something in your head and draw it in front of the camera, then see the result on the camera screen, you can’t help but get a kick out of it.”

Gareth progressed through point-and-shoot compacts for several years before 2009, when the photographer finally realised that he was ready for a DSLR. “I already understood all the fundamentals,” he explains, “but instead of jumping into the deep end, I opted to start from the entry-level cameras and chose a Nikon D3000.” While he was still getting to grips with the camera, Gareth discovered that he needed extra features such as bracketing, and just two years later he upgraded to the D90 which had all he needed for better low-light photography. Then, the start of 2013 saw the photographer purchase a Nikon D7000, predominantly because of its low long-exposure noise levels – and it’s this camera that Gareth’s now shooting with.

On a typical shoot, Gareth carries a Manfrotto 190XPROB tripod (“very handy with a shoulder strap”), his Nikon camera plus a release cable for working in Bulb mode, then a Sigma 24-70mm f/2.8, a Yongnuo YN560ii Speedlight and wireless transmitters, plus some flash

**ORBS OF DINAS BRAN** “I used the LED Lenser X21 torch to bring out shadows on the rocks, but the rest was lit from the light of a full moon that kept on making an appearance through the clouds.” The X21 torch sells for around £180 and has an output of 1060 lumens. It features an advanced focusing system and the light from the seven CREE chips has a throw of over 500 metres. Gareth also has the X21R which is rechargeable and has 1600 lumens output. *Nikon D90, Nikon 18-105mm f/3.5-5.6, 288secs at f/7.1, ISO 100*

**SNOWY ORB** “I made the most of the snow and light pollution to help illuminate the scene.” *Nikon D7000, Sigma 24-70mm f/2.8, 210secs at f/6.3, ISO 160*

gels – and then, of course, the light sources themselves. Like most light painters, the main bulk of his kit comprises torches of all kinds and colours. “I love lights – I see them as paint brushes for me to paint the dark sky like a canvas,” he says. “I recently went to Blackpool Illuminations with my son, and I ended up getting more light-up toys than he did!” ➔



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## “If I’m light painting, I can use the moon’s power as a helping hand to illuminate the landscape”

Normally Gareth carries an LED Lenser X21R torch which gives off 1600 lumens. “It will illuminate the darkest environments,” he explains. “I do also have other LED Lenser torches such as the X21, H7 head torch and P7 hand torch – LED Lensers give off a very clear white light in comparison to other torch manufacturers, which is why they’re considered the best for light painting photography.”

In addition to the pure white light supplied by his Lensers, Gareth holds LEDs in general in high regard. “I have lots of them, from LED bulbs to strips and even battery-powered fairy lights!” he says, “and nearly all of the light sources I have, I’ve had to build myself.”

Being handy with a soldering iron is an essential skill to create the complicated, eye-catching, ‘how does he do that?’ images that Gareth’s become known for. He shares his creations on Flickr and 500px, citing these two communities as his main source of inspiration, and learns new techniques by playing around with his camera and torches. “If there’s something I’m not too

sure of, I’ll look it up online, then I’ll go out and practise what I’ve just learnt until I get it right.”

Location is always a very important part of an image, but light painting requires a special combination of factors: secluded areas well away from light pollution and inquisitive locals are often the best bet, but these are few and far between. Gareth always scouts out a spot before venturing out alone in the dark. “I used to just explore areas at night and end up lucky,” he says. “I always check the forecast and if I’m in the open, I look into the moon phase as well. If I’m shooting a star shot, I’ll aim for no moonlight at all – but if I’m light painting, I can use the moon’s power as a helping hand to illuminate the landscape.”

Another unpleasant side-effect of shooting alone is getting spooked. “The scariest shoot occurred in the summer, when I was up a mountain and heard a screaming sound. Instantly I turned everything off and froze, praying I was hearing things. Then, just as I was about to start light painting, I heard it again, but

**3 ABBEY ORB** “I tried to be clever with this one. The ruins are in Greenfield, North Wales, so there’s red, blue and Greenfield. I managed to attract the attention of the police while shooting this one. They saw lights and came to investigate, but after a chat and a demonstration they left me to it.” *Nikon D90, Nikon 18-105mm f/3.5-5.6, 403secs at f/6.3, ISO 100*

**4 END OF THE LINE** “This image was lit by my LED Lenser X21 torch and the rest of the light was purely from light pollution – apart from the orb.” *Nikon D7000, Nikon 18-105mm f/3.5-5.6, 235secs at f/5.6, ISO 100*

**5 CELTIC ORB** “I stumbled across this structure while walking up a local mountain called Moel Famau. It’s actually a viewing platform for the surrounding mountain range, but it caught my eye and I had to do something with it” *Nikon D7000, Nikon 18-105mm f/3.5-5.6 lens, 329secs at f/6.3, ISO 100*

a lot closer. I packed all my kit away and started to make my way back down, when again I heard the screaming noise. I turned my torch in the direction it was coming from and noticed something jumping in the bushes towards me – I couldn’t believe what I was seeing! It was a fox running towards me. Needless to say I didn’t hang around to find out if it was after me or not, and I ran down to my car as quick as I could! I haven’t been back up there since,” he laughs. ➔





6

“Gareth credits his camera club with the best piece of photographic advice he’s ever received, to always enter club competitions”



7



8

**6 HOTLINE** “This is a disused railway station and the location helped to make the shot different. Ambient light was from a full moon.” *Nikon D90, 18-105mm f/3.5-5.6 lens at 18mm, 243secs at f/6.3, ISO 100*

**7 RIBBON TRAILS** “Shot in the local park. I had just built a new light painting tool and was desperate to try it out.” *Nikon D90, 18-105mm f/3.5-5.6 lens, 200secs at f/7.1, ISO 400*

**8 COLOUR FALLS** “I used the Lenser X21R torch here with stars from a smaller torch with coloured gels.” *Nikon D90, 18-105mm f/3.5-5.6 lens, 232secs at f/7.1, ISO 125*

**9 THE SINGING, RINGING TREE** “I found this amazing sculpture on the Internet. It’s called the Singing Ringing Tree as when the wind blows through the pipes it creates a humming sound. It sounded eerie – I must admit it kept me on edge while I was there.” *Nikon D90, 18-105mm lens f/3.5-5.6 lens, 170secs at f/5.6, ISO 100*





Gareth's compiled a huge collection of images and his accounts on Flickr and 500px are well worth a visit, but there's one picture that the photographer picks out as particularly noteworthy. "The picture I am very proud of is the Pac-Man image," he reveals. "It was created for my camera club, Wrexham Photographic Society, for a talk I did for them on light painting. I had to mark on the floor where I needed to stop and start, not to mention writing backwards. The weather also made it particularly difficult: one moment the moon would be out and the next behind clouds, so it was a battle of adjusting the aperture up and down and trying to outsmart the moon.

I also had to move very fast, otherwise I would have shown up on the exposure. What you see on this image was captured entirely straight out of the camera in one single long exposure – and this image was also made editor's choice on 500px."

Gareth also credits his camera club as the source of the best piece of photography advice that he has ever received.

"Always enter competitions at your local camera club," he suggests. "It's interesting to see what the judge says about your work, and if you agree you can go away and fix it, or know [what to do] for next time."

Gareth dreams of turning his photography into his career and becoming

a professional shooter: and if the quality of his creations are anything to go by, it surely won't be too long before this photographer's working the night shift for real – watch this space. ○


**SEE MORE:**

**Flickr:** [www.flickr.com/photos/garethbrooks](http://www.flickr.com/photos/garethbrooks)

**500px:** <http://500px.com/garethbrooks>

**Facebook page:** [www.facebook.com/garethbrooksphotography](http://www.facebook.com/garethbrooksphotography)

**Twitter:** @uklightpainter  
[www.uklightpainter.co.uk](http://www.uklightpainter.co.uk) – currently under construction







# COVER OF DARKNESS

*With more hours of darkness than daylight now, if you want to give your camera some exercise it's time to turn to the dark side*

**WORDS & PICTURES** WILL CHEUNG

The brilliant thing about night photography is that you can indulge in it almost anywhere. It really depends on what you want to shoot and which techniques take your fancy. Clearly, if you want great pictures of beautiful buildings you need to be in the right place, but if you want to explore traffic trails or paint with light, an ordinary street, the back garden and your

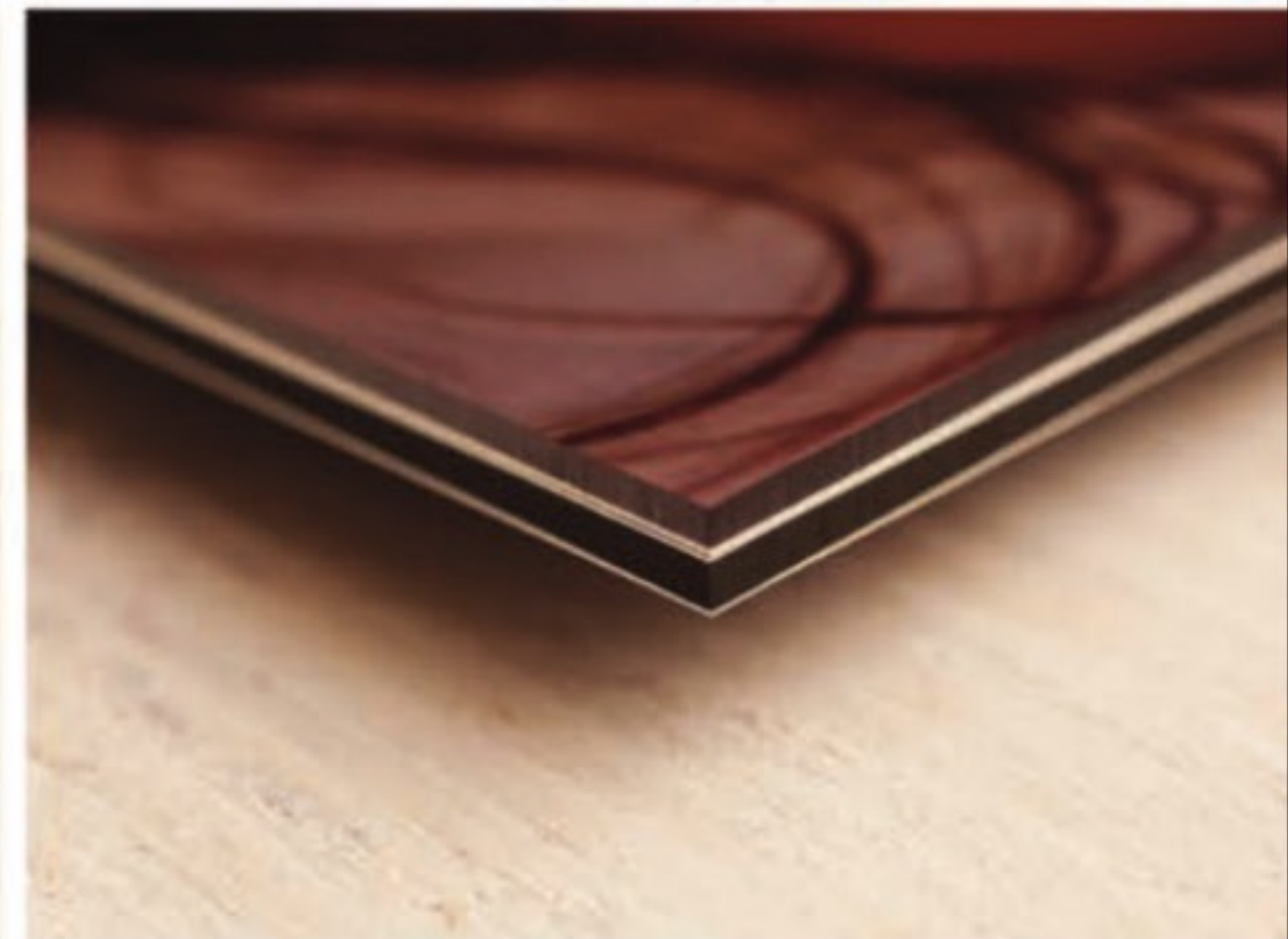
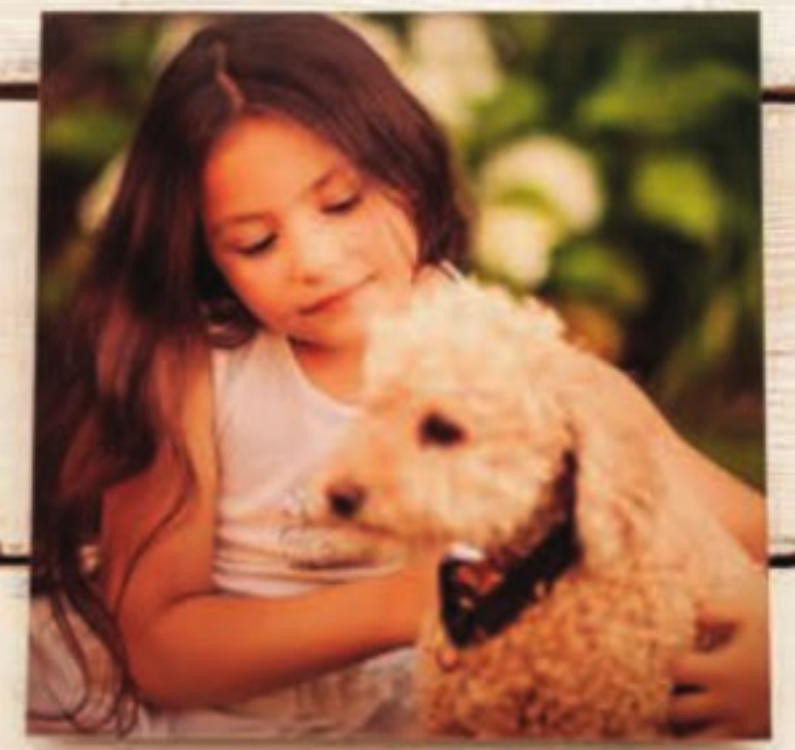
local town centre can all make for effective locations. The town centre, however, is not that great if you want to try wire wool spinning – you are best off in the open.

At least you don't have to worry about whether the sun's going to shine or not and as for those annoying pylons in the distance, you can't even see them, so what's the problem? ➔





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The cover of darkness does make life much easier in some respects but of course, it's not all plain sailing and shooting in the dark does have issues, both practical and technical. On the practical front, you need to think about safety, so perhaps avoid less salubrious areas of town or at least go with a companion or two. If you are in very dark areas close to a road, a high-vis vest is worth considering.

A good torch will help you see where you're going while a head torch will help you see what you're doing on the camera. Many cameras have a backlit LCD info monitor or the info in the viewfinder might be illuminated so you can see what has been set. Use the rear monitor or Live View and again seeing the settings isn't an issue, but to adjust settings most of us still have to use dials and buttons and that's where a torch can come in handy. Unless that is, you know your way around the camera in the dark. If you're not fully conversant using a camera in darkness, a bit of practice in front of the TV will be worthwhile.

As well as the camera and lenses, of course you will need a decent tripod and a remote release, preferably one that allows the shutter to be held open when used in the B setting.

This set-up is fine for conventional night photography subjects such as lit buildings, traffic trails and moonscapes. Should you want to paint with light or spin wire wool, extra accessories will be needed.

With respect to light painting, it depends on what effect you are after. For effects like those achieved by Gareth Brooks in his portfolio on the preceding pages you need to be a little inventive and see the possibilities in fairy lights and ➔



## WIRE WOOL BURNING

This is fun to try and it's easy to get decent results even on your own, although a companion is very handy, either to do the spinning, to help compose or to fire the shutter.

- 1** Take safety precautions: wear a thick coat, glasses or goggles, hat and put a protection filter on the lens – a while ago, a keen wire wool burner posted an image of his Nikon 14-24mm zoom with a damaged front element. Check out <http://bit.ly/19BrG0w>.
- 2** You then need a bulldog clip or a food whisk and a piece of stiff wire, dog lead or bootlace to attach it to. Roll up a small ball of wire wool (you don't need much) and place it in the clip or whisk.
- 3** Pick your spot somewhere suitably dark and mount the camera on a tripod and fix a locking remote release in place. Set B and for white-balance try a manual 3200K value – or fix in Raw later. Frame and focus up – manually is best – and use a torch to

light up where you intend to stand. Focusing can be tricky so take your time.

- 4** You're all set. Open the shutter, walk back to your spot (without using a torch). With your back to the camera, light the wire wool with a cigarette lighter, turn round and start spinning. Burning wire wool glows but as you spin the flow of air intensifies this greatly. Don't stop until the wool has run out and when that's happened, return to the camera and close the shutter.
- 5** Reload with more wool for your next go only when the bulldog clip/whisk has cooled down.
- 6** Then experiment. Try spinning above your head or traversing across the camera's field of view or walk towards the camera while spinning.





MOONLIGHT ONLY



MOONLIGHT PLUS THE LENSER P7 TORCH



Nikon D800, 16-35mm f/4 at 16mm, 130secs at f/10, ISO 200

## ADD YOUR OWN LIGHT

Both these images of Portland Bill lighthouse were exposed for 130 seconds.

There was a hazy full moon which helped to light up the foreground (left). The right shot benefitted from the light of a Lenser P7 torch (£50) used from the camera position. The torch was moved constantly during the

exposure. This was the third attempt. The first go did not have enough torchlight on the distant rocks; the second try didn't have enough light on the foreground rocks on the right. This final attempt is pretty good but perhaps that rocky outcrop on the left and the sea needed a little more.

The P7 torch has a focus control and this was varied depending on what was being painted, ie. a tight beam was used on the distant rocks and a wider light spread used for the beach and closest rocks.

It's a matter of experimenting with your light source, and some trial and error.

strips of coloured LED lights. Gareth is also a big user of Lenser LED torches. These give a very good white light, almost daylight like, and most have an integral optical zoom so you can focus the light into a narrow beam. Even the small torches have a very good throw, well over 100 metres, depending on the model.

Lensers and similar torches can be used to paint buildings or even landscapes and because you can see what you are painting with a torch, in that regard it's easier than using a flashgun.

That said, using a flashgun is perfectly manageable and large areas can be painted. There are three key things to remember when painting with a flashgun. One, remember not to stand between the camera and area you are painting when flashing because you will record as a ghostly figure. Two, you will need to give more flashes than you might think when lighting an outdoor scene. Three, keep the LED info panel covered as you walk about the scene flashing away because if you don't, it will record in your image.

Another popular light source is electroluminescent wire – known as EL wire. Basically it's a thin wire that glows when powered up and it's available in many colours. Widely used in industry, it has now found a use in photography. With the camera shutter held open on B, illuminated EL wire slowly waved



**ABOVE** All light sources can be used for interesting night images. Experiment with your light source as there are lots of effects you can achieve so adjust camera settings for variety. Remember to stay safe though.

around can give spooky lighting effects. And with practice, EL wire can be very effective used on its own or combined with other interesting lighting sources. If you want to try wire wool painting, check out the accompanying panel and remember to take safety precautions.

Thanks to the immediacy of digital capture you can check your shots as you

go along, make adjustments if it's not what you're looking for and then reshoot. Of course, there's no cost either.

With techniques like painting with light and wire wool spinning, you need some experience so don't expect perfection immediately and you should practise in the garden before doing a proper shoot.

Persevere, though, and your results can only get better, so good luck and make the most of the long winter evenings. ○

**“With practice, EL wire can be very effective used on its own or combined with other light sources”**

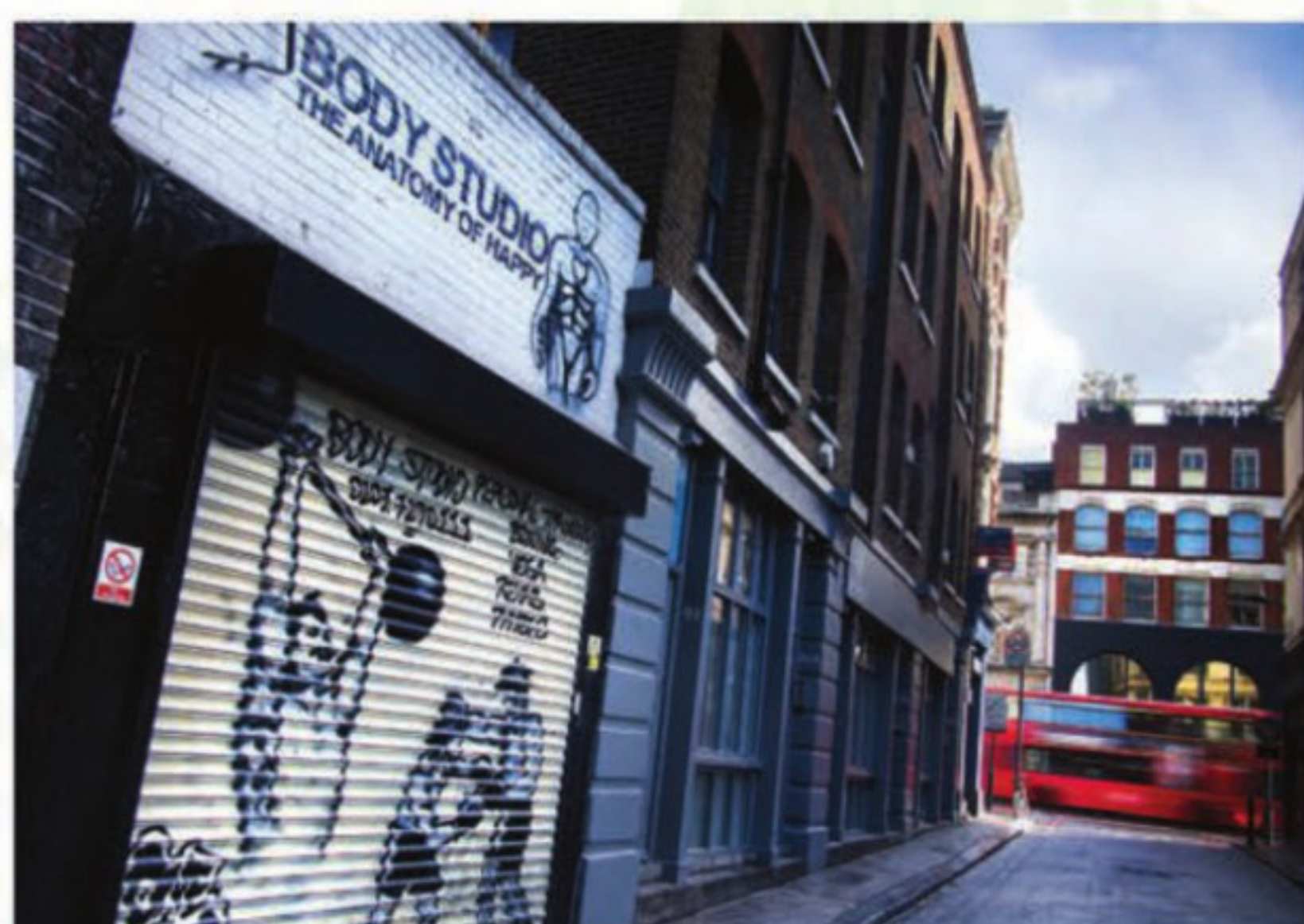
**NEXT ISSUE: MORE NIGHT MOVES**



# sev5n

## ■ micro filter system

The back streets of any city also provide great subjects for urban scenes. This side alley required a three stop grad filter to avoid the sky being washed out. It was then a matter of timing, waiting for a passing bus to add a splash of colour.



0.9 ND soft grad

Architecture, movement, colour and drama. This scene has it all and needed two filters to capture it successfully.

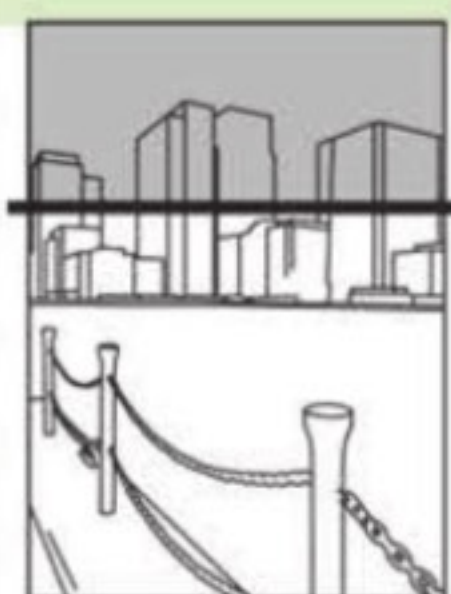
Firstly, a polariser boosted the colours and controlled the direction of the reflections. Then a three stop soft grad balanced the bright sky to avoid burn out.



Polariser + 0.9 ND soft grad



British skyscrapers may not be as tall as those in the rest of the world, but they still impress. A long exposure adds interest in the sky and the water that surrounds them and whilst the blue cast of the filter is easily correctable, here it actually adds a pleasing cool hue.



0.9 ND soft grad & Big Stopper

The Seven5 System embodies all that I love about the larger LEE 100mm System, but in a convenient compact size. I can carry all my gear and filters in a small bag, perfect for shooting in an urban environment.

*Craig Roberts*

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TOP SPOT

# Heybrook Bay

# Heybrook Bay

*For photographers everywhere the coast is a real draw, and if you're lucky enough to live by the sea, you're bound to have a favourite seaside spot, as Andy Fox does*

WORDS & PICTURES ANDY FOX





Aim a wide-angle lens downwards and you make the most of any foreground detail.  
*Canon EOS 5D Mark II,  
Samyang 14mm lens,  
4secs at f/11, ISO 100,  
2-stop ND grad*





I am not one for the cold and would rather curl up by the fire reading a photo magazine or book than run around chasing the tides in the wind and cold. Unfortunately for me, this is when you get the best movement and conditions for seascape photography. Thankfully like most things, once you're out there it's worth every minute. In fact, some of my best photography is shot around this time of year. The Devon and Cornwall coastline has some of the most breathtaking scenery in the whole of the British Isles, in my opinion, and I am lucky to live right in the middle of the two counties.

Whenever possible, I try to plan my shots in advance. It's nice to know what you might see. Just simple things like the weather, tides and surf conditions are useful. Living in Plymouth I am lucky enough to be able to see the skies around Heybrook Bay from my kitchen window. So planning a visit can be done in just a few seconds. The first thing I do is check the sky. If there are lots of broken clouds and broken sun, then it's probably going to give me some nice textures to work with. Next I check the tides and weather forecast. Fortunately Heybrook Bay is a good place to shoot whether the tide is in or out.

Sunrise can be hit or miss, I find, so I prefer to shoot at sunset. Then you have the added advantage of being able to see beforehand what might happen at sunset.

People often ask me if I prefer low or high tide for my photography and I have to say it all depends on the location. Some beaches and coastlines favour a low tide, with features like rocks and shorelines aiding composition, but Heybrook Bay has the luxury of both; it's good whatever the

**“I love my ultra-wide Samyang 14mm lens. It gives me a totally different composition from any other lens in my bag”**



tide. However, saying all this, I prefer an outgoing tide, purely for safety. That way I can concentrate on getting the shot and not worry about getting cut off by the tide.

I like to shoot as wide as possible, and I love my ultra-wide Samyang 14mm lens. It gives me a totally different composition from any other lens in my bag. With an ultra-wide lens like this, you can create amazing lead-in lines with water and cloud that other lenses can't seem to pull off. However it does have its drawbacks; for example, when you have straight lines







like buildings in the composition. Then you have to keep it perfectly level, but this kind of distortion is an asset when it comes to seascapes. In fact, it almost becomes a feature – I point it at unusual angles and see what I can get. You could try pointing the camera down low for dramatic seas, waves or rocks, or tipping it up for some cloud action. Not every seascape (or landscape) has to stick to the rule of thirds.

Using filters on ultra-wide lenses can be a real problem. Normal 100mm filter systems are redundant; you really need a 150mm filter system. Unfortunately they are quite expensive. However there are ways to get around this. Obviously, one way is to spend lots of money and buy them. That's easy enough, but where's the fun in that? The second way is to take two or more exposures and combine them in post-production. Personally, I like to get the shot in one frame; it's just neater that way. So this is the third way that I use.

I wait until just after sunset, drop the ISO to 100 and set  $f/22$ , to try to get a shutter speed of one or two seconds. Using Live View, I then meter for the foreground and let the sky do whatever it wants. To dodge some of the light from the sky, I use a black hat or glove as a flag. Before I release the shutter, I position my flag on the horizon as close to the lens as possible. Then once the shutter is open and the exposure is halfway through, I pull the flag sharply up. This takes a bit of practice to get right, but produces some amazing results – try it for yourself.

I've probably visited Heybrook Bay hundreds of times over the years and I've never seen the same view twice. It's one of its best qualities – that and the fact that it's so close to home for me. ☉

**IMAGES** Being this close to the sea, your kit might get a bit salty and damp. Pack a microfibre lens cloth to mop spray off the lens or filter and a travel towel to cover and dry off the camera.



**NEXT ISSUE:** SPURN POINT, YORKSHIRE



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# Exposed

GLOBE-TROTTERING EDITOR WILL CHEUNG ON HIS LATEST PHOTOGRAPHIC ADVENTURES

I first went to a camera club meeting nearly 40 years ago. As an 18 year old with the social skills of a snail (they're no better now!) I must admit that it was an unnerving experience.

It was the beginning of the season, so a time for existing members to renew their subscription and say hello to their mates, but it was also an informal, practical shop window to show what the club offered to entice new members. There were people talking cameras, a flash studio set-up with a girl to photograph and someone doing some tabletop photography. I'd imagine it's a scenario that is still repeated countrywide today.

I recall I was one of three lads who turned up. We were all around the same age and total strangers but because we had something in common, ie. we were the only three without grey hair, we stuck together as we went round looking at the various 'attractions'.

One chap, who turned out to be the club's president, was talking through and demonstrating his Leica M rangefinder collection. I'd never touched one before but had heard about them and I was pleased as punch that he let me have a play. He even took out the film of the M2 so I could release the shutter, and fitted a lens. I went round the room pretending to be a photojournalist. I was hooked on Leica M from that moment. You have to remember that SLR shutters and reflex mirrors of the day were very noisy so to hear just a whisper of gears when the shutter button was pressed was almost an epiphany.

**“I went round the room pretending to be a photojournalist. I was hooked on Leica M from that moment”**



**ABOVE** Camera clubs offer keen photographers the chance to mingle, learn from and be inspired by like-minded souls. They also provide an important creative and competitive outlet for all levels.

It was many, many years later before I could afford to buy one – a used M4P – and I have it to this day and still put the odd roll of film through it.

The other demonstration that kept me enthralled, perhaps not surprisingly, was a girl being photographed by a chap called Bill, a local schools photographer. He was using a Nikon F fitted with a 250-frame back and again I was very excited when he passed the camera to me. He explained how the camera worked, talked a bit about the mains flash lighting and then he just left me to it. To get the chance to use such a fabulous piece of kit was brilliant.

What I really liked about Bill was that he just talked to me normally, not as a youngster or a beginner, but as a fellow keen amateur photographer. Every club needs a 'Bill'.

Reflecting back, I only returned for a second visit and then subsequently joined the club because of these two people, and as for my two fellow youngsters, I never saw them again. I will be forever thankful that I became a club member because my life might have taken another course if I had just walked away.

Anyway, the reason for this lengthy preamble is that I've recently joined my local camera club. Last September I went along to the new members' evening and joined.

What, you may be thinking, is my motivation in giving up

my Tuesdays to go along to a camera club? Well, that is a very good question and I have several answers: to learn, to be inspired, to give something back and for the social aspect – there's a bar at the meeting venue.

Since joining I have been to four meetings – I missed three because I was away and three because of work. I've seen a couple of club competitions, one speaker who happened to be Brian Beaney who was featured in issue 38 of *Advanced Photographer*, and one members' evening, which was really good.

I know a camera club isn't everyone's cup of tea – and I'm not 100 per cent sure it's mine – and with the Internet you could argue that bricks and mortar clubs are dinosaurs in a modern age, but you know what, for me, so far, so good. ☺



# EXPERIENCE DAYS

Courses and experience days are great ways of improving your imaging skills and more fun than sitting in front of a computer. In this new series of features we'll be checking out a selection of courses and events first-hand to see if they deliver on what they promise. We start with a day's introduction to Lee Filters

WORDS & PICTURES WILL CHEUNG

It was an unorthodox start to a day course but it was an honest one. "I'm really sorry," says course leader and professional photographer Jeremy Walker, "but I made a mistake and we have ten of you on the course, not eight which is our usual maximum. Hands up, my fault."

His candour goes down well and there's no protest or sense of outrage from the ten clients, gathered here in a comfortable hotel on the Isle of Portland.

I think it helps when Jeremy introduces the other two Lee Filters representatives, managing director Eddie Ruffel and marketing manager Peter Sturt, saying that they're both capable photographers and experts on the Lee Filters system. Three experts to ten clients is a very good trainer-to-pupil ratio, even more so when none of Lee Filters team will be taking pictures for themselves. "We've had some brilliant light on our courses but we never take pictures, the focus is on the clients," explains Peter.



IMAGES There was a ratio of three experts to ten clients on the course, as course leader and professional photographer Jeremy Walker was helped out by Lee Filters' Eddie Ruffel and Peter Sturt.

With the formalities concluded Jeremy enquires who has a set (a few hands go up). "This is basically a Lee Filters sampler day," he says. "Today is about getting to know the system and the core techniques to use the key filters, so there's no such thing as a silly question. We run two-day courses and there the focus is much more about pictures and using filters to get the best results."

He went through the core basics of using a Lee Filters system so everyone was at the same level. It was a practical demonstration and full of useful advice. "The polariser is made from glass unlike the graduates

that are made from optical resin. It won't bounce," he says. "So don't try to screw the filter onto the holder while the holder is on the lens. Instead take the holder off and then screw in the polariser before replacing the holder on the lens." Given that the 105mm rotating polariser is at the thick end of £250 this is very good advice and exactly the sort of thing a course like this will teach you.

Jeremy's talk was supported by a simple representation. It wasn't death by Powerpoint and he just showed some before and after landscapes showing how the use of graduates, the polariser, Pro Glass (neutral density) and the Big Stopper can benefit your photography. It was very clear that it was the Big Stopper the assembled group was most interested to learn about.

The inevitable availability question was asked. This filter is so popular that waiting times for stock have been running into months. Jeremy skilfully passed this question onto the Lee guys. "It's around eight weeks at the moment and getting better," says Eddie. "The thing is that if you want one, place an order – you can't expect to just go in and pick one off the shelf."

Jeremy went into some depth about using the Big Stopper. Put in a nutshell the process was: secure the camera on a tripod, attach remote release, set white-balance manually to 10,000K, compose, turn off →







## WHAT THE CLIENTS THOUGHT

### KEITH WALKER

"Although I own a basic set of ND grads, I had only attempted to use them once, so have little filter experience. Being able to use this system successfully with a rangefinder camera brings extra challenges, but the Live View viewfinder available on the Leica M (240) makes the system viable.

"I certainly left the course with more understanding and a lot more confidence, and feel I now know the correct techniques to use. However, I think the classroom session could cover more difficult lighting situations. For example, the system booklet shows using ND grads horizontally to deal with a bright window in an indoor scene but this wasn't discussed.

"As so often, much of the enjoyment comes from interactions within a group, and this was certainly the case here. In a way, only keen photographers are going to justify such an event, so there is a good chance that the group will be of reasonable ability and good to work alongside. This was certainly the case and did make the whole event very sociable, fun and enjoyable.

"I was struggling a bit to justify spending £190 on a supposedly sponsored group day on using the Lee Filters system, but expected to come away with a good basic proficiency. This expectation was met, and I came away well satisfied and happy that it was a worthwhile investment.

"The only thing that caused some muttering was the five per cent discount offer from a particular retailer whose prices are not that competitive in the first place. I think if Lee is going to promote this as a benefit of the event beforehand, they need to ensure it is a genuine benefit or not bother."



# Capture your creativity

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## WHAT THE CLIENTS THOUGHT

### KAREN LAWRENCE

"The only filter experience I've had was with a sky filter and a polariser and they weren't from Lee. I left feeling confident – because of the ratio of participants to experts I felt I had access to help at the point I needed it. Also no one made me feel like an idiot although I probably was one on more than one occasion!"

"I think the Lee team spread themselves around the group very well. I was not the easiest person to get round to see because I had to be further away as I was using a long lens, so the fact that people went out of their way to come and see me and make sure that I was getting the most out of the day was great and very much appreciated."

"Probably the only thing I would say is that a simple wrap-up session would have been good to consolidate what people got out of the day, what lessons they learnt. I felt we did not get much of an exchange in terms of how others felt they had done and I am curious about learning from others and their experiences as much as from the experts themselves."

### JERRY PADUANO

"I have some Lee ND grads and just received a polariser and Big Stopper. I'd tried using the grads, but it had been very much trial and error, and I'd failed miserably once with the Big Stopper."

"I left the course feeling confident about using grads, Pro Glass and Big Stopper. I am conscious that I need to practise what I have learnt in order to become fully confident in my technique."

"Having the Lee team there made it feel really special. I learnt a lot about how it makes its filters and now appreciate much more what goes into it all – and why they are so relatively expensive. Their presence and their approachability really made a difference."

"The mix of people on a course is never predictable, but this was a good group, with a range of experience – and opinions! Everyone enjoyed themselves and was good to talk to."

All my queries were answered well and left me with the confident feeling that the information was accurate and complete. It would have been interesting to try different types of location, although as an introduction to neutral density filters, it worked well."

"Overall, the course exceeded my expectations – plenty of hands-on time, with easily enough people to advise and educate whilst we were out on site. I enjoyed it so much that I have enquired about other courses."



noise reduction, focus, meter, calculate exposure, slide the filter into position, close the eyepiece blind or cover the eyepiece and then expose.

The briefing lasted about an hour with questions, and everyone was soon equipped with a set of filters, a holder and previously-requested adaptor rings. A five-minute drive in convoy and a stroll downhill got us to the first location, Church Ope Cove. Jeremy suggested everyone start with graduates then move on to the polariser and then the Big Stopper. There was a quick briefing before our ten L-plate filter users scattered along 200 metres of beach to practise their newfound knowledge. This was definitely where having three pairs of hands is better than one as Jeremy, Eddie and Peter spent time with each client sorting problems and going through the techniques again.

It was an unseasonably warm and calm November day and the conditions could not have been any more user-friendly. 90 minutes of practise and tuition later and our clients could tear up their L-plates and you could tell their confidence had soared in that short period and it was on a high as everyone headed back to the hotel for lunch.

By the time we reappeared, the sun had gone and it was a flat grey afternoon. Our second session was on Portland Bill, to the east of the lighthouse around the crane. With the tide coming in, most people went first for the Big Stopper on its own but were soon ambitious enough to couple it with an ND graduate. Again the Lee team stuck close with their clients and by now everyone was having fun and getting good shots.

An hour later we walked a few hundred metres to another location facing Pulpit Rock. This artificial stack of rock is a popular spot and very photogenic despite the flat lighting of the afternoon. With light fading there seemed to be a race to get the

**IMAGES** The course covered using graduates, the polariser, Pro Glass and the Big Stopper, with the latter proving a popular choice for attendees.



longest Big Stopper exposure. "I've just done an eight-minute exposure," says one, only to be immediately trumped by "I've got a 12-minute exposure going." It wasn't that long before Jeremy told everyone that it was so dark that there was no point using the Big Stopper and suggested going to the 0.9 (3-stop) Pro Glass and reminding everyone that this was a true ND filter and that white-balance needed changing back to daylight or AWB from the 10,000K being used for the Big Stopper.

It was getting dark by the time we headed back to the hotel for tea and cake followed by any final questions, handing back the borrowed filters and our departure.

In sum, as an independent observer, I thought everyone had a fruitful day and lots of learning was done in a very convivial atmosphere. I think having three experts on hand definitely helped and while Lee Filters is not a training company, as the Lee guys are quick to point out, it certainly knows how to look after its clients. ☺

➔ **Contact** [www.leefilters.com](http://www.leefilters.com)

Look under Product Directory for details for forthcoming workshops, <http://bit.ly/1kzbq5g>

**NEXT ISSUE:** A NIGHT-TIME EXPERIENCE WITH OLYMPUS



# On the streets

*We offered the chance for one reader to enjoy an expenses paid trip to Brussels to shoot its world renowned Christmas markets and other tourist hotspots. That reader turned out to be Mark Stimpson and this is his story of the shoot*

WORDS & PICTURES MARK STIMPSON

I was over the moon to have won. Like many people, I've entered competitions before and had always ended up with a thanks but no thanks email. I had to read the email a couple of times as I couldn't believe I had won, and it took a while for the reality to sink in.

For the trip I packed my DSLR (already loaded with one of the five Samsung 32GB SD cards that was part of the prize package), 12-24mm wide-angle, 28-135mm and 70-200mm telephoto lenses, tripod, cable release, a couple of strong

ND filters and, of course, the other four Samsung SD cards.

I stayed in the Sofitel Louise in the Ixelles district of Brussels and once checked in, I didn't hang about. I went straight to the Grand Place which was a gentle 20 minute stroll from the hotel. Along the way I passed the Palais de Justice. Occupying a space bigger than St Peter's Basilica in Rome, this has to be one of the world's most impressive 19th century buildings. It was a pity that it was shrouded in scaffolding.

On reaching the Grand Place I started photographing the baroque architecture before moving on to some street photography. The square was filled with tourists and everywhere you looked, people were taking photographs with an assortment of equipment, from mobile phones to top-end DSLRs. I noticed a woman using a tablet. From where I was standing it looked like her head had been replaced by the tablet. However by the time I had reacted to photograph her, she had moved the tablet up slightly revealing her chin. The shot didn't work as well as it could have done.

I thought it would be good to try to photograph what these people with their phones and tablets were photographing. Ideally I wanted the image they were taking to be on the screen. When I saw an ideal candidate, I selected a large lens aperture so that the individual would stand out against the background and focused on the phone. The result was quite pleasing.

As it began to get dark I started photographing the town hall. As the light levels dropped, I upped the ISO so I could still hand-hold the camera. As it got darker a music and light show took place. I found a good vantage point, dropped the ISO and put the camera on the tripod ready for some long exposures. My plan didn't quite work, because as soon as the music started, the square started to fill up with tourists. My spot quickly became crowded. The tripod was knocked a few times by people not watching what they →

## SAMSUNG MEMORY

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were doing. Fearing that the camera would get knocked over I packed up and went to see the Christmas market in Place St Catherine which was a short walk away.

The market was very busy and there wasn't anywhere I could use a tripod. Therefore I went back to plan A and upped the ISO and wandered around taking a few pictures before heading back to the hotel.

The next day I had planned to get up early to photograph the sunrise over the lake in Parc Leopold but that idea was quickly abandoned due the morning rain.

Not to be put off I decided to visit the European Commissions building instead. This is an interesting building. I wandered around the building photographing it from different angles and with different lenses. I

found the best was from the side to capture the curve of the building. As I was shooting, the glass shutters were opened creating numerous lead-in lines. I hoped to enhance the picture by converting to mono.

I next walked up to the Parc Du Cinquantenaire with its magnificent central archway, which was based on the Arc de Triomphe in Paris.

I had hoped to photograph the archway but the light was poor and the sky, a grey nothingness so getting a decent photograph wasn't looking promising. I had an idea that using HDR would give me the chance to improve the sky on the computer.

I started off spot metering for the brightest part of the photograph then for the darkest part. Making a note of both I

now had the dynamic range between the light and the dark. I then worked out how many exposures I needed to capture the range and shot accordingly. To capture the full arch I shot a panorama made up of four HDR photographs. I converted the result to black & white for extra atmosphere.

Next I had look in the Autoworld museum with its collection of some 300 cars. I would have liked to have looked at the military museum next door but time was getting on and I wanted to get back to the Grand Place.

On the way back I walked through Albertine Square, filled with flags. I had seen this the previous day from the road that goes overhead. As I looked down on the square I had an idea to shoot long exposures of people as they walked through the flagpoles but despite waiting for ages no one walked though the square so eventually I gave up.

**“I wandered around the building photographing it from different angles with different lenses”**





**IMAGES** Like most major cities, there's a massive variety of subject matter to explore with the camera and Brussels will keep you busy all day long – in fact, all weekend!

My next stop was the statue of Manneken Pis which is five minutes from Grand Place. When I arrived, a well mannered bun fight was in progress, with people jostling for the best positions to photograph the little boy. I stood back away from the crowd and took a few photographs of the crowd as they were photographing. On one side was a shop with a big 'I ♥ Brussels sign' which I thought might look good as a background.

I then walked into the crowd to try to capture the statue on someone's camera or tablet screen.

From here I went back to Grand Place and Place St Catherine for more street photography. As the sky grew dark I took a few photographs of the ice rink. I managed to find a space to set up my

tripod so I could do some long exposures to blur the skaters. I finally took a couple of long exposures of the ferris wheel before returning to the Eurostar station.

Over the weekend, the Samsung SD cards worked flawlessly. The write speed was really impressive, even when shooting continuously there was no need to wait for the images to be written. I felt confident that the card could handle whatever I threw at it. I will definitely be sticking with the Samsung cards.

I loved Brussels, there is so much to see and do that it was impossible to cram it all into a couple of days. I will definitely be going back. So a big thank you to *Advanced Photographer* and Samsung for the exciting opportunity to photograph this great city.









# MUD LARKS

*The Tough Guy challenge is not for the faint-hearted, whether you're a runner in the race or a photographer like John Powell, whose vivid portraits of the day's events capture all the emotions and the pain of those taking part in this unique and very British sporting event*

WORDS TIM McCANN PICTURES JOHN POWELL

It's not unusual for the going to get tough on a farm, in the middle of January: freezing temperatures, all too few daylight hours, and the worst of the winter weather to contend with. On one particular farm, however, when the going gets tough, you'll find the tough crawling under barbed wire through freezing mud, negotiating a wall of burning hay bales, or clambering through a partially flooded tunnel, complete with hanging batons and electric cables. Welcome to the Tough Guy Challenge, an →

Photographing events like the Tough Guy challenge means you'll see just about every emotion possible from the 7000 participants tackling this most gruelling of cross-country courses. *Fujifilm FinePix S5 Pro, 1/750sec at f/4.5, ISO 200*









2

## “I’ve always been interested in some form of competitive photography. It’s what makes you progress and become a better photographer”

annual 15 kilometre race with up to 7000 participants, designed to test the courage and bravado of anyone who thinks they’re hard enough to have a go.

As you emerge from the one of the dozens of torturous obstacles, if you dare to take part in this gruelling challenge, you’ll no doubt be staring straight down the lens barrel of John Powell’s Nikon D2x as he attempts to record the full spectrum of emotions unfolding throughout the day.

“I was first alerted to the Tough Guy competition by images I saw on the UK exhibition circuit”, says John. “As this is a fairly local event for me, I thought I’d give it a go. The Tough Guy challenge is organised twice a year, first in January and then again in July. I always enjoy the January event in particular, as this is the most challenging for both competitors and photographers.”

John’s love affair with photography began with the birth of his son some 30 years ago. “Those early photographs were mainly snapshots, using a cheap compact camera that I purchased from Dixons.

Picture quality was really poor, with many shots appearing out of focus or badly exposed. A relative of mine suggested I invest in a proper camera, meaning an SLR. The best I could afford at that time came in the form of an all-manual 35mm Mamiya. I think I kept that camera for about a month before trading it in for a Nikon.”

He hasn’t looked back since. A self-confessed Nikon man, John’s website is part photography gallery, part homage to the Nikon brand, with images of his vast collection of bodies and lenses collected and treasured over the years.

Equipped with his first Nikon SLR, John didn’t hang around and joined his local camera club to hone his skills as a burgeoning amateur photographer. It was in the club environment where John was bitten by the competition bug, and he started entering the monthly merit competitions. “It was from this experience that I became acquainted with all the various photographic exhibitions, both nationally and internationally. I’ve

**1** John keeps a keen eye on any race participants wearing strong colours, which enable them to stand out from the mud and smoke as they negotiate burning hay bales and sub-zero temperatures. *Fujifilm FinePix S5 Pro, 1/455sec at f/5.6, ISO 200*

**2** John is happy working in both colour and black & white given that both formats are well suited to portraiture. Here, the mono approach successfully conveys the hardship endured and steely determination of each runner as one clammers from a muddy trench covered in barbed wire. *Fujifilm FinePix S5 Pro, 75mm, 1/140sec at f/4.2, ISO 200*

always been interested in some form of competitive photography. It’s what makes you progress and become a better photographer, I suppose. All my awards are important to me, none of them came easy.”

John was recently awarded an Associateship from the British Photographic Exhibitions, having gained over 400 acceptances in BPE exhibitions over recent years. There are currently around 40 photographers who have qualified for the distinction, a relatively small number considering the award has been going for a little over 20 years.

Rightly proud of his photographic achievements, John’s competitive spirit has driven him to develop a prowess in many genres spanning colour, black & →





& white and infrared. He's a 'complete photographer' in many respects, tackling any subject. The Tough Guy portraits have won him recognition for their ability to put the viewer up close and personal with the participants as they make their way around the gruelling course.

"I want to come away at the end of the day with something that's different from what everyone else takes. I tend to work mainly in colour, but I'm equally happy to convert to monochrome should the subject warrant it. I'm lucky in some respects because most of my images are portraits, which work well in both formats."

Despite the extremely tough conditions these competitors endure, John modestly asserts that it is still quite easy to get in close. "Often all that separates competitor from photographer is a length of rope. Seldom do I use a lens longer than 70mm. Most of my Tough Guy portraits are taken with a very wide-angle lens, a 15-30mm being my favourite.

"Having shot this event for several years, you get to know which parts of the course pay the most dividends. The cooperation between competitor and photographer is very good, sometimes too good, as some will often stop and happily pose for you. I tend to discard these images later and

concentrate my efforts on capturing the more serious competitors. With so many participants, there's always a good number of runners passing through all stages of the course throughout the day."

John is a self-confessed traditionalist when it comes to the craft of taking photographs. "I don't have any special techniques other than reading the histogram. I've always had this fascination with wide-angle portraits; I started experimenting with a 10-20mm lens a few years ago and it steadily progressed from there over the years.

"I don't tend to go so wide these days, as not everyone is comfortable having a 16mm fisheye thrust in their face! What you soon realise on the day is that the runners are so fit and healthy, they make it look so easy. All they want to do is smile at you. As a photographer you have to avoid that and make it look like it's tough, which of course it really is. For me, that is the overriding photographic challenge – capturing the pain on their face or the sheer delight of making it."

**“I’ve always had this fascination with wide-angle portraits; I started experimenting with a 10-20mm lens and it steadily progressed from there”**

**3** Hands on head in celebration and disbelief as this runner beats everything the Tough Guy challenge can throw at him. Many of John's portraits are taken in close proximity to the runners. *Fujifilm FinePix S5 Pro, Nikkor 80-200mm f/2.8, 1/350sec at f/4.5, ISO 200*

**4** John's attention is drawn to runners with colourful kit as it allows them to stand out more successfully against the muddy backdrop. Seeing the expression on the runner's face is vital in order to convey the conditions they're faced with, such as the icy and muddy pool in this action shot where John draws our attention to the splashing mud. *Nikon D2x, 18-200mm at 200mm, 1/350sec at f/6.3, ISO 200*

**5** "What you have to realise is these runners are so fit and healthy, they make it look so easy. All they want to do is stop and smile at you. As a photographer you have to avoid that, and make it look like it's tough." *Nikon D2x, 18-200mm at 62mm, 1/160sec at f/6.3, ISO 100*

After the shoot, John shortlists the day's photographs and processes them in Photoshop. Just like his approach to capture, the aim with post-production is to keep it simple and straightforward. "I →













7

**6** One of John's favourite portraits from his Tough Guy project, the self-titled 'Oh! That was tough' mono portrait. "That photograph says everything," says John. *Fujifilm FinePix S5 Pro, 165mm, 1/160sec at f/5.3, ISO 200*

**7** This team with their bright and colourful Smurf costumes was the perfect subject to convey the hardship, eccentricity and happy atmosphere of this very British event. *Nikon D2x, Nikkor 18-200mm f/3.5-5.6, 1/160sec at f/6.3, ISO 100*

**8** Another Tough Guy runner takes stock of another obstacle in this challenge. The freezing air and steam rising from the runners helped to give this mood and depth. *Nikon D2x, Nikkor 18-200mm f/3.5-5.6, 1/160sec at f/6.3, ISO 100*

learnt photography by shooting film and that's how I treat digital – by getting it right as much as possible in-camera."

For those of us thinking of developing our own skill photographing events like the Tough Guy challenge, John's advice is keep it simple both in terms of kit and your approach to capturing the action. "It doesn't matter what subject you care to shoot, don't burden yourself with too much gear. More often than not, one camera and one lens will get the job done. I try and capture colourful images first and

foremost, so I look out for runners with colourful tops – this will help them to stand out against the mud and grime. You have to see their eyes, faces and expressions."

Planning and preparation of your position is also key. John tries to get in place ahead of the crowd after learning the layout. Once in place, it's a matter of waiting, but the rush soon arrives and that's where a steady and calm approach can really help out.

"I am not trigger happy, I choose my time and pick my shot." Again, keeping things simple is the watchword, with John using one autofocus selection point, often in the centre of the viewfinder, to capture the runner. Everything is shot using available lighting on a low ISO using his Nikon D2x's Matrix metering.

"It's also important you pay particular attention to backgrounds," John advises. "Backgrounds are often more important than your subject. Know your subject, learn as much as you can about it – then keep it simple, and remember not to become too over-reliant on the computer, and aim to get as much of the shot right in-camera."O



8



#### SEE MORE:

[www.dotcomphotography.co.uk](http://www.dotcomphotography.co.uk)

The Tough Guy Challenge is held in Perton, near Wolverhampton, in January and July every year. Find out more about this extraordinary endurance event at the website. [www.toughguy.co.uk](http://www.toughguy.co.uk)





## COLD SNAP

*It might be chilly outside but there are plenty of photographic subjects to keep you and your camera toasty this winter*

**WORDS** WILL CHEUNG  
**PICTURES** VARIOUS

Naturally enough, most action events take place during the warmer months and of course that does make photography much more comfortable. But there's plenty going on in the winter months too. If you have a mind to get out there and endure the conditions, there are great images to be had, as John Powell's portfolio over the last eight pages testifies. John's images are from one event but there's a good selection of sports worth taking the camera out for. For example, there's road running, mountain biking, horse racing, ball games and motorsport to name but a few.

The first thing is to make sure you are comfortable and in a fit state to enjoy the opportunity. If your mind is focused on the cold and wet rather than on what's happening in front of you, you won't be fully alert and pictures will be missed and that's even assuming you get the camera out. So dress appropriately – waterproofs, layers, hat, gloves, boots, thick socks and so on. It's obvious stuff really but it is always surprising that some photographers turn up underprepared.

Think about kit protection too. Make sure all your lenses are fitted with UV or →





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**ABOVE** Getting low for an unusual angle is a simple technique to try.  
*Nikon D200, 12-24mm at 12mm, 1/800sec at f/8, ISO 400*



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**ABOVE** Shooting sports you must take care – of yourself and your camera kit. If the weather is grotty or there's mud flying about cover the camera with a travel towel.

skylight filters and have a pack of Op/Tech Rainsleeves (a pack of two costs £6) in the bag in case it rains. A microfibre travel towel thrown over the camera and lens can work too to keep the elements off your kit.

If the weather is really bad make sure the camera bag's rain cover is in position to keep the contents dry.

As usual with action photography shutter speed choice is the key camera setting to take care over. You may already be at the lens's maximum aperture so it's about exploiting ISO to allow you to set action-stopping shutter speeds.

Modern digital cameras are so good that shooting at ISO 800 or higher is no longer an issue in terms of digital noise. On the latest models you can even go two or three stops faster without image resolution

suffering greatly.

Looking at it another way: if you have the choice between a blurred, noise-free image or a sharp image exhibiting some digital noise, you have to go for the latter. Anyway, processing a high ISO Raw image through software gives you an opportunity to minimise noise without impacting on fine detail.

Any noise in your images can enhance the mood in the shot so that's an option to consider too.

The shutter speed required to stop the action depends on the subject and the effect you're after. Clearly the faster the subject's movement the faster the shutter speed required for razor-sharp images. So for motorsport action you might be in the 1/1000sec or 1/2000sec territory but

for road runners, slightly slower shutter speeds will still take sharp pictures.

In terms of exposure mode, using shutter-priority AE is a good idea because you always know what shutter speed is set, but it's fine to use aperture-priority if you prefer, as long as you keep an eye on the shutter speed in the viewfinder.

Slow shutter speeds can be handy too. You can try getting some deliberate blur in the subject, or explore panning with the subject so the relatively slow speed blurs the background but without losing too much subject sharpness.

With action another creative option is mixing flash and daylight, either trying the fill-in flash technique or slow sync flash, with first or rear curtain flash sync. However, you need to have a reasonable amount of flash power at your disposal or be able to get pretty close to the subject. Getting a good viewpoint is always a challenge with action work, and you stand ➔

**“You can even go two or three stops faster without image resolution suffering greatly”**





© ADAM DUCKWORTH

**ABOVE** A shutter speed of 1/1600sec was needed here to sharply record the action and flying mud while a 300mm lens gave a flatter perspective.



## TAKE A FRESH LOOK

Always look for unusual viewpoints to give your pictures a twist. Most photographers shoot obvious action shots and that's perfectly fine, but be aware of unusual opportunities. A drinks station at a road running event, for example. There's an obvious

focal point, ie. the drink, so all you have to do is frame and focus up and then wait for the right moment to squeeze the shutter. Timing is important and because depth-of-field is minimal you do need to tweak focus to keep the subject as sharp as possible.

a better chance at local events. With many sports, you will still be behind a safety rope or fence but with some events like road running or cycling you can be right next to the participants, so take care you don't get in the way when you're using a wide lens.

One thing you will have to pay special attention to is the background. You can get a great position for the action but if the background is full of people wearing high-vis jackets they will prove a distraction and you will end up having to deal with them during processing.

Your position dictates lens selection, but something like a 70-200mm or 70-300mm (there are four lenses tested in this issue) will be plenty enough for many events. But take a wide angle for variety – and in case you can get close or want to shoot an unusual viewpoint. With Live View and articulating monitors it's easier than ever to shoot from higher up or right down at ground level.

Shooting action, whatever sport you go for, is always a challenge and presents different obstacles compared with landscape or shooting in the studio and for that reason alone, it's worth doing. So, go on, get out there. ☺

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# LIGHTING

## A C A D E M Y

*How do you like your light, hard or soft? Most of the time soft light is preferred, but sometimes you don't have the choice so here's our advice for dealing with harsh light*

WORDS & PICTURES JOHN DENTON

For people photography we often strive to work in soft light because it's easier to manipulate, more flattering on our subjects and it's less painful for them – no squinting. However I've been on my travels for much of autumn at various locations around the Mediterranean and for much of that time we've been working with hard light. Back in the UK with the sun so low in the sky, we may end up taking pictures in quite brutal light so here is my guide for shooting in strong sunlight using flash and reflectors.

**1** Let's start with the main image. This was taken on my Portugal workshop in September and I was attracted to the area by the light, colours and the possibility to shoot with the bright blue sky behind Nikki.

I started by metering the sky area with the camera's metering system. In manual exposure mode I filled the frame with the sky and used Matrix metering mode. I wanted to use flash to fill in so I couldn't go beyond the flash sync speed; I set 1/200sec to be on the safe side. Now all I had to do was to zero the metering scale by adjusting the aperture control. At ISO 200 I got an aperture of f/8.

I stopped down an extra 0.6EV to f/10 in order to give extra punch to the colours in the sky. This would have made Nikki's face and body much darker if she was just lit by daylight from behind and so I had to put some flash light on her. I thought the harder light of a ringflash would work and so asked a delegate (thanks David Morpew) to lean over the wall camera left and hold the light flat to the floor.

The power of the light was adjusted to give light on Nikki and also around the stairwell at the same value, f/10, as previously metered.

Only when I'd taken the shot did I see the beautiful arrow of sunlight coming down the steps to the right of the frame. Sometimes you set everything up with exactitude and it's the serendipity in the shot that blows you away

**2** As the Algarve sun slipped even further down in the sky it kept its intensity producing distinct long shadows and hot spots. Nikki was actually relaxing when I took this shot, but the vintage look of the shades and swimsuit put an idea in my head so I simply had to jump in and take a picture.

I didn't want to blow out the highlights so I took the exposure reading from the hottest part of the skin. I was happy to let the shadows go as deep as they wanted to – there is always some latitude in a Raw file but I would always rather get the highlights correct and adjust the shadows if required rather than try and recover blown hot spots.

My camera was already at 1/200sec at f/8 and ISO 200, and this suited me as there was a lot of light and the aperture would give me a nice balance between foreground sharpness and enough depth-of-field on the grass in the ➔

1

MAIN IMAGE Nikon D300, 18-70mm lens, 1/200sec at f/10 and ISO 200, cloudy white-balance for greater warmth.

RIGHT Nikon D300, 18-70mm lens, 1/400sec at f/8, ISO 200, cloudy white-balance.



2



**RIGHT** Nikon D300, 18-70mm lens, 1/200sec at f/20, ISO 200, cloudy white-balance.

background. So standing astride Nikki's legs, I worked at 1/400sec. By turning her face into the sun I got strong modelling across it and because she was wearing shades she could shut her eyes for comfort.

From Portugal we travelled to Malta and shot fashion in the harshest of noon day sun. Here two images stood out for me. Both were taken using the Elinchrom Quadra Ranger fitted with a Maxilight reflector dish.

**3** I positioned Nikki against the sky because I loved the cloud detail as it was rare in a bright blue sky. Normally I would shoot with strong sunlight behind my subject to back light them and put the flash in from the front for fill-in. This wasn't possible here as the sun was high in the sky to camera left. So I placed Nikki on a wall and crouched low. This accentuated her proportions and also placed the buildings of Valetta out of sight.

The sun was beating down on her and so again the sunglasses are not just a part of the fashion look but an essential. She could

3



close her eyes behind them and nobody knew the difference.

To meter, I was in manual mode and filled the frame with the sky and took an exposure reading of 1/200sec at f/16. I lowered the aperture to f/20 to darken the colours and placed the flash to my left. You may ask why use flash in an image where the model is in direct hot sunlight. Well, just look at how she pops from the background and the shadowless light on her – that's the reason.

The flash was almost at full power to hit Nikki with enough light to match the f/20 aperture I was using to expose for the sky. If anything the flash was brighter than that which is why she has a nice glow about her. I always use a flash meter to check output, but never be afraid to adjust it a little up and down to review the effect.

**4** Our second image here from Malta also used the hot midday light. It was filtering through some trees and providing a strong pattern on the wall. I positioned Nikki at the bottom of the light strip and metered off the hot spots. By exposing for them I came up with a manual exposure of 1/200sec and f/16 at ISO 200 – this recorded the

5



**ABOVE** Nikon D300, 18-70mm lens, 1/200sec at f/22, ISO 200, cloudy white-balance.

highlights nicely and made the shadows much deeper.

This time the flash was placed to camera right and aimed at Nikki's stomach to give an even spread across the body and also produce those strong shadows from her body and from the stones on the wall. This technique, known as feathering the light, directs the light of the flash with modifier across the subject, rather than straight at them, to give a more subtle effect and also produce the shadows. In many ways the image is wrong as it has two obvious light sources but by using the flash to dominate the low light, and match the strong light, we've created mood and drama. I also set a manual white-balance setting of 3850K to cool down the image.

**5** From Malta it was off to Cyprus. We started on the coast at noon. A meter reading said 1/200sec at f/22 and I placed the Quadra Ranger with Maxilight at full power camera right to give the appropriate exposure across Kelli's body with a reflector to camera left to fill in the shadow side of her body. The sun was directly behind her as we can see in the highlights around her and on the water. The shadows show the strength of the sun that the flash was working against.

So there you have it, my guide to working in harsh light. Whether you're shooting at home with the low sun or somewhere more exotic, experiment with these techniques. ○

## About John Denton

If you'd like to join any of John Denton's lighting adventures abroad check out his website for the latest details.

→ To see more images from these shoots: [www.dentonphotography.blogspot.com](http://www.dentonphotography.blogspot.com)

→ To join John's workshops: [www.JohnDentonTraining.com](http://www.JohnDentonTraining.com)

Model featured here:

→ Nikki Hafter <http://nikkihaftermodel.tumblr.com/>

### Thanks to

→ Maltese Institute of Professional Photographers [www.mipp-malta.com](http://www.mipp-malta.com)

→ Cypriot Professional Photographers Association [www.facebook.com/cyprusphotographers](http://www.facebook.com/cyprusphotographers)

4



Nikon D300, 18-70mm lens, 1/200sec at f/20, ISO 200, manual white-balance.

**NEXT ISSUE:**  
TOP TIPS FOR SELECTIVE LIGHTING





## Quadra Hybrid RX The World Is Your Background



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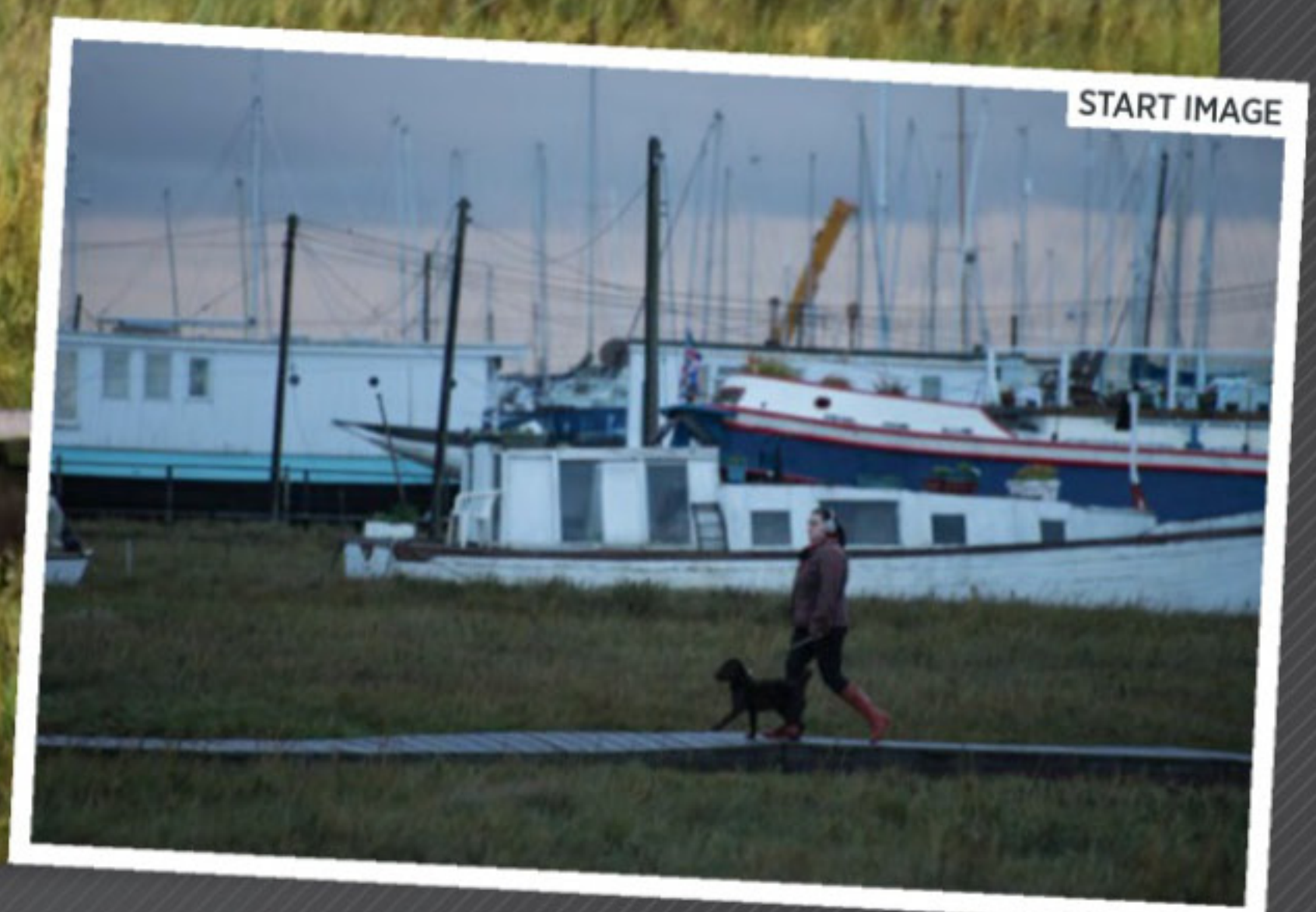
RAW MASTERCLASS

# OUT OF THE MURK

At this time of year, when the light drops off so early in the day, your software skills are essential to make the most of your shots

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## The story behind the picture

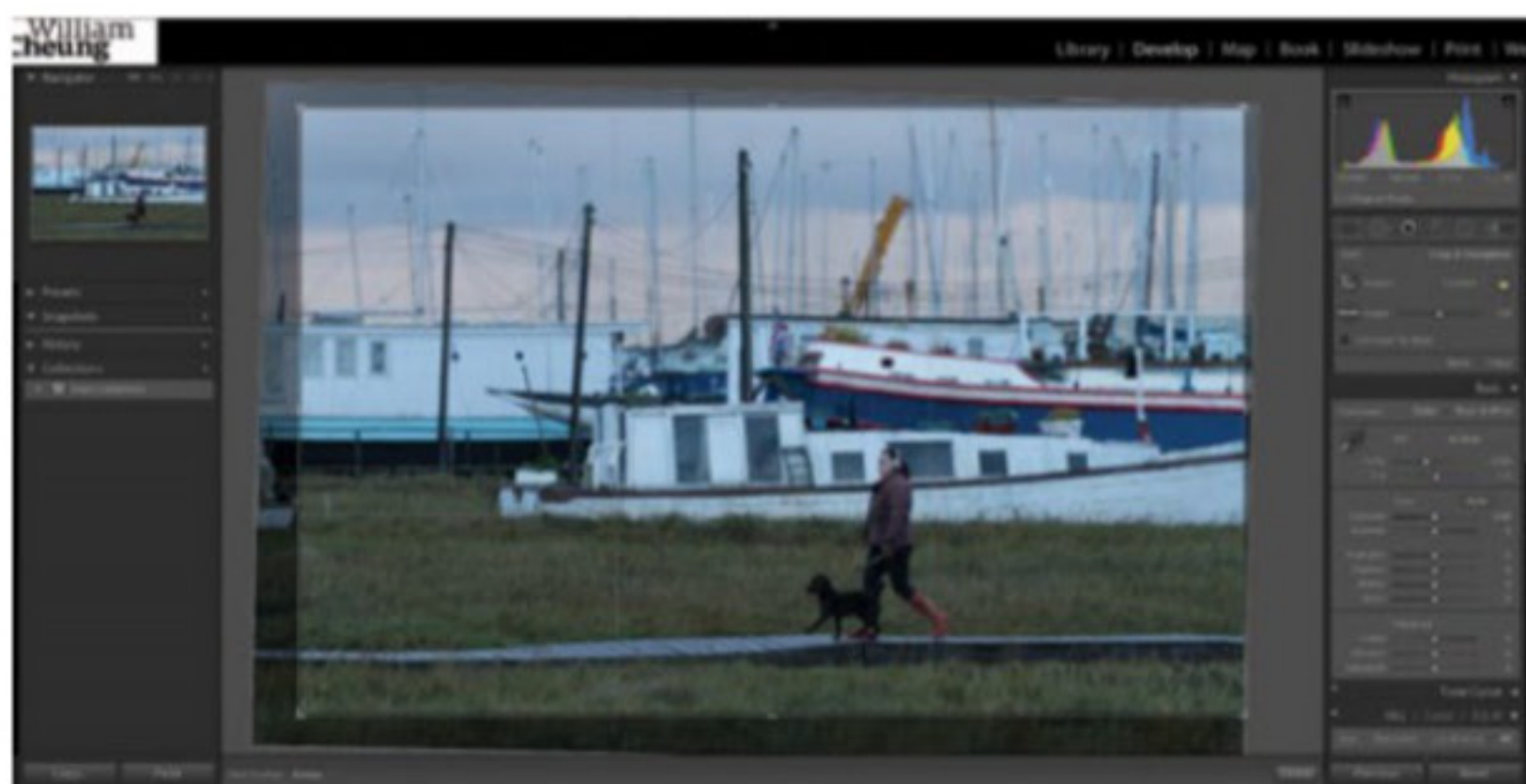
Late afternoon in November on a damp drizzly day at the coast wasn't especially photographer friendly. I was at Mersea on the Essex coast, a place I used to visit a great deal.

Nevertheless, I was practising what I have been preaching for ages and had my camera out, switched on and ready to shoot.

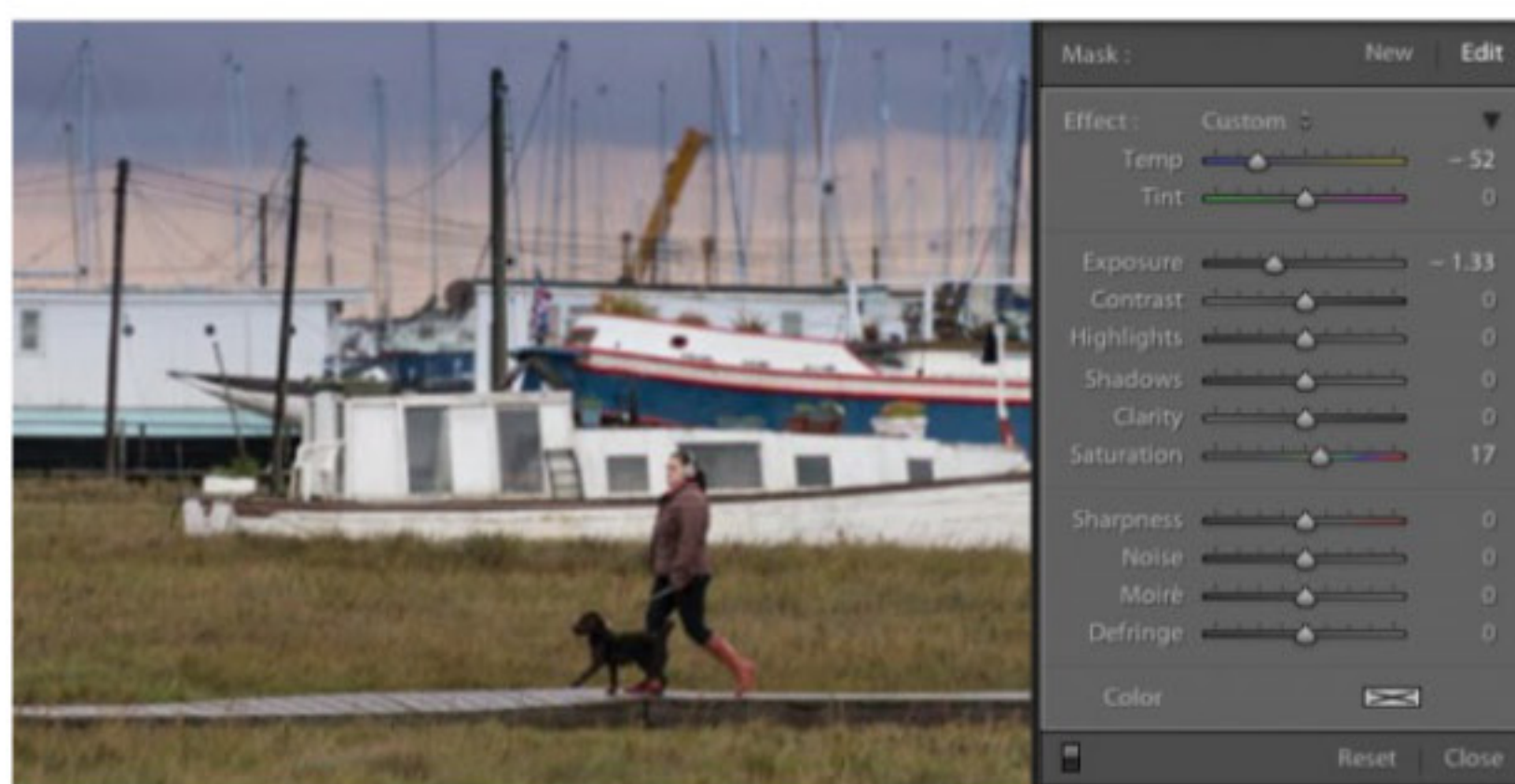
I wasn't greatly inspired because the light was so flat but a lady walking her dog caught my eye and I squeezed off a few frames. I was wide open on the 70-300mm at 300mm so I knew I was at the limit of my handholding skills, even with the lens's Vibration Reduction system switched on.

Checking the image in the Lightroom catalogue I could see it was sharp enough but it was so FLAT! There was barely any contrast, rather too dark and while the camera's auto white-balance feature did its best, the image had a distinctly cool feel and it generally needed help in Adobe Lightroom 5 to spice it up a bit.

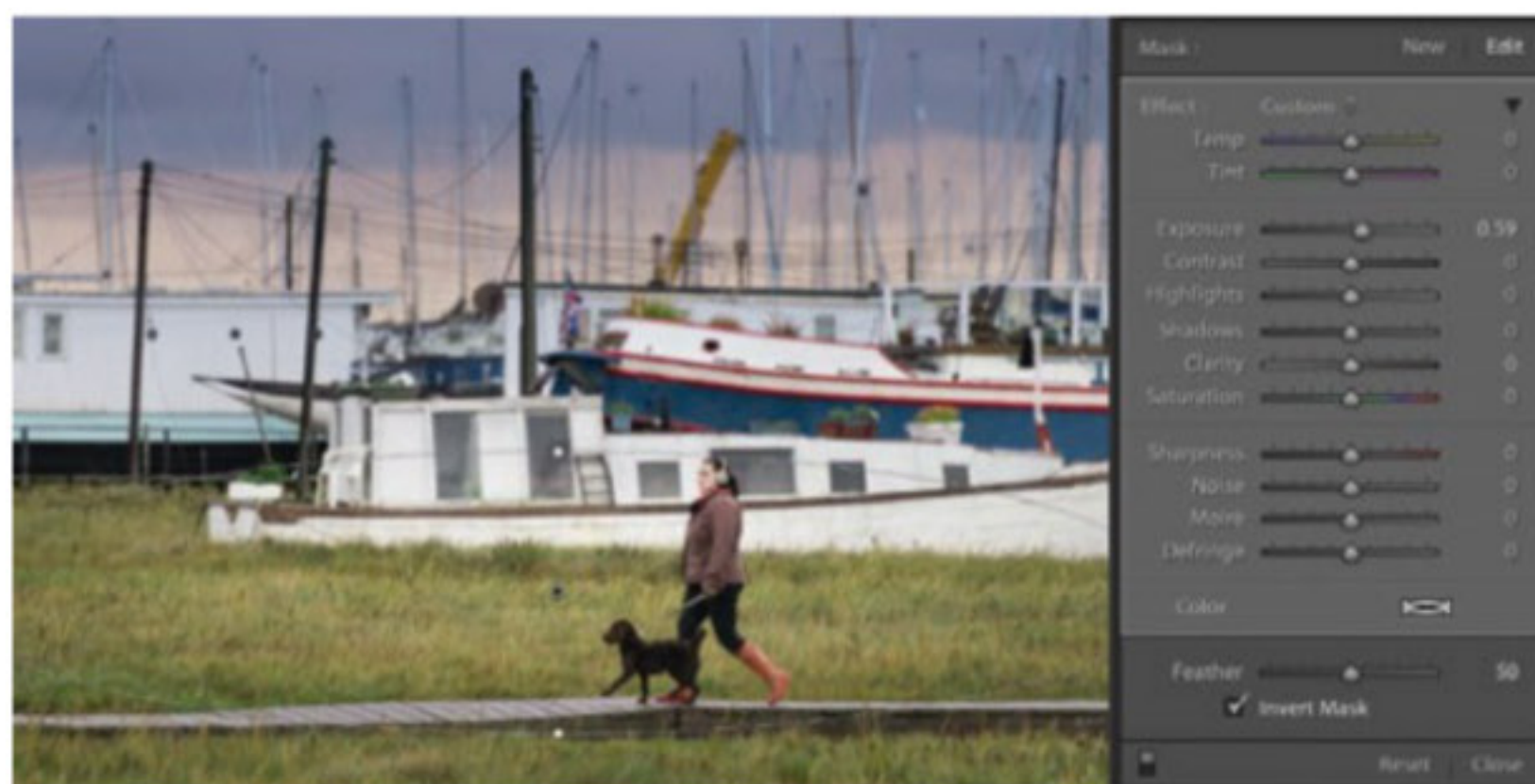
### STEP BY STEP: IMPROVING A DARK IMAGE



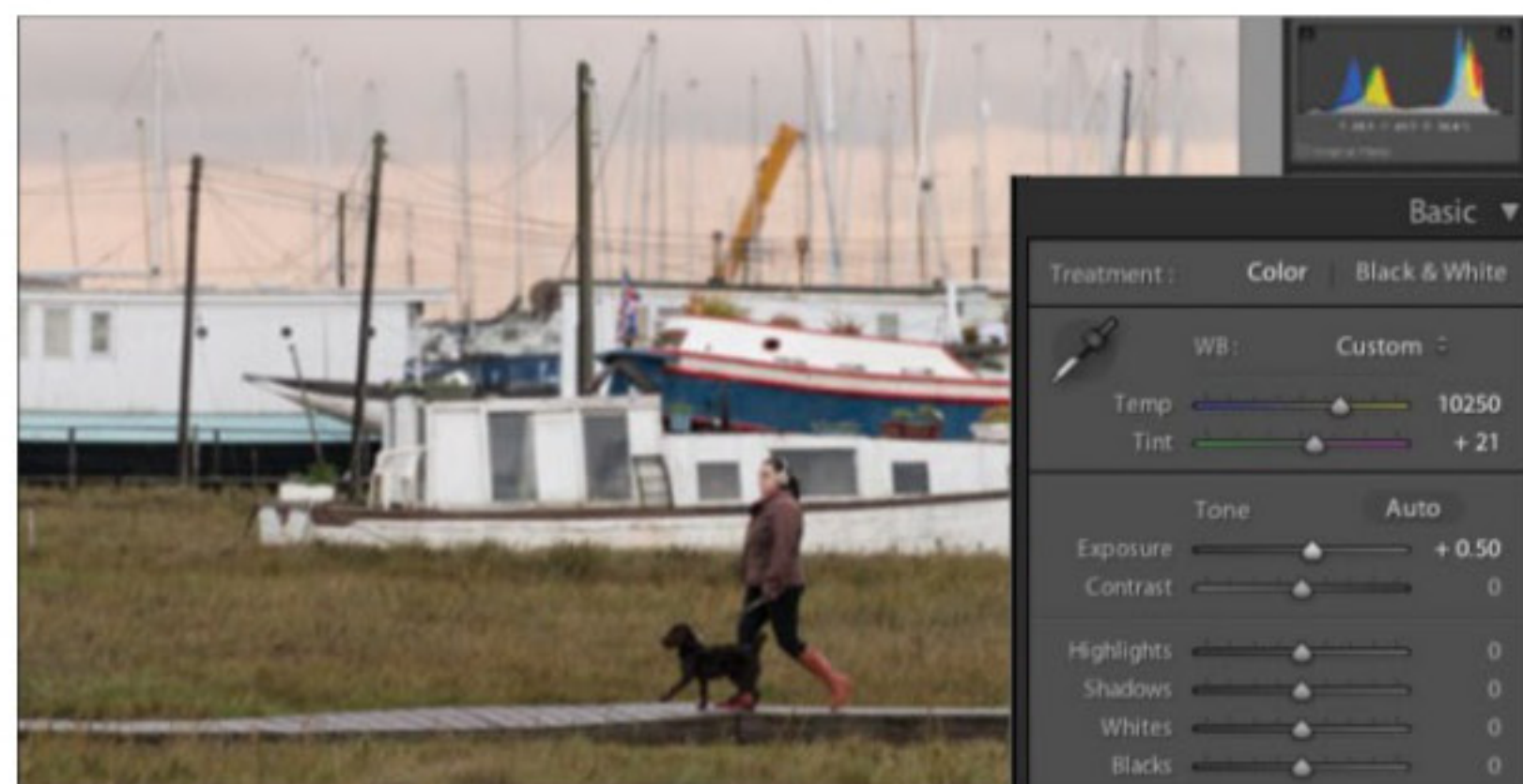
**1 Crop it down** I started by going to Photo>Create Virtual Copy and then in the Develop module, under Lens Corrections I ticked Enable Profile Corrections and Remove Chromatic Aberrations boxes. Then went to the Crop Overlay tool (shortcut key R) to straighten the image up and tighten the framing.



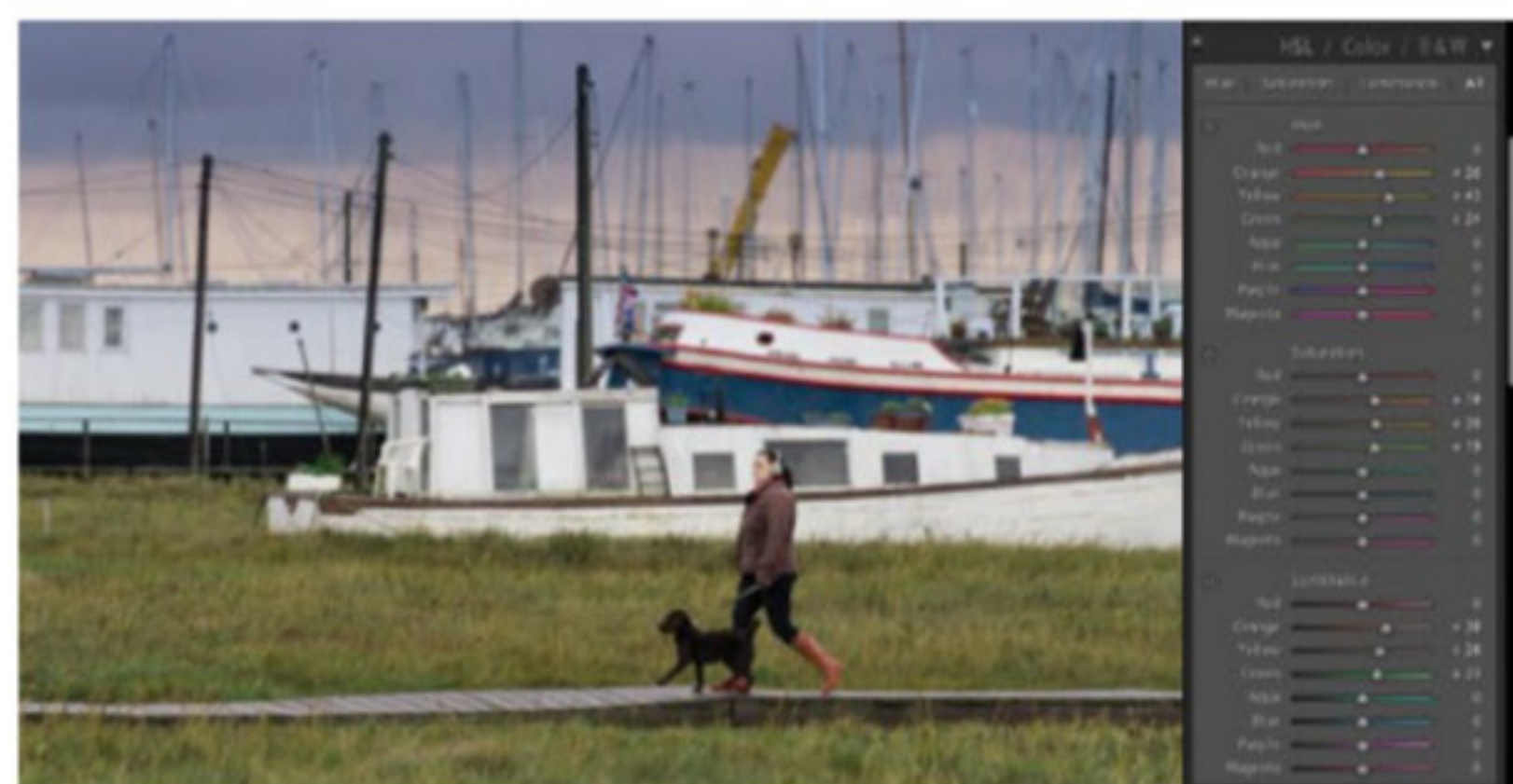
**3 Keep the mood** The image is friendlier and lighter but I didn't want to lose any mood so I dropped a Graduated Filter from the top, adjusting the exposure of the filter to -1.33, the white-balance to -52 and Saturation to 17 to enhance the colour slightly.



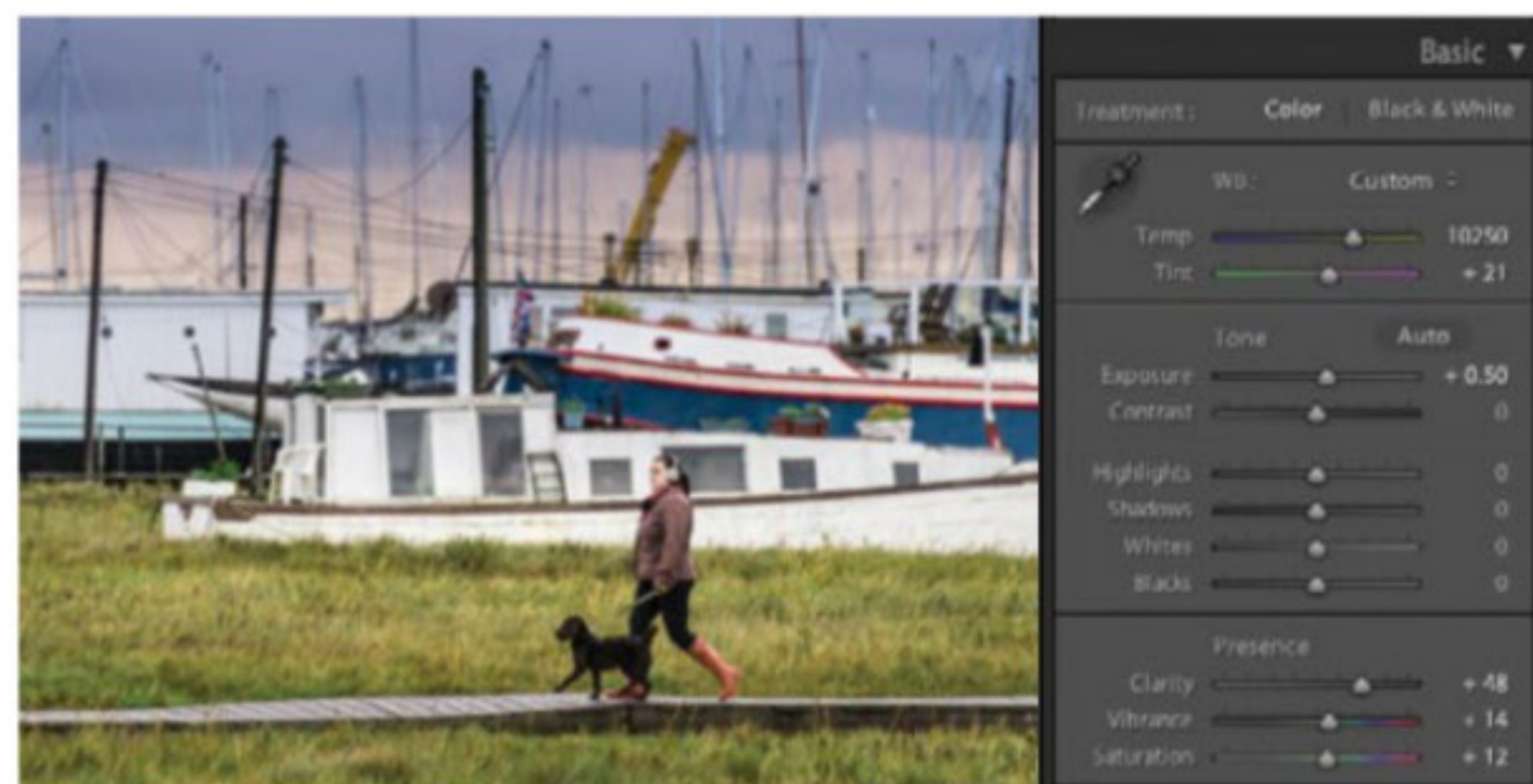
**5 Lighten a little** The lady and her dog needed to be a bit brighter so using the Radial filter I drew a cigar shape mask across the bottom area of the image and then ticked the Invert Mask box. The Exposure was moved to 0.59 to lighten the selected area.



**2 Basic enhance** The cool balance was resolved by using the Dropper tool in the Basic tab and just clicking on a white boat. The Kelvin value went from 5750K to 10,250K and the image was much warmer. I then moved the Exposure slider to +0.50 to lighten the shot.



**4 Colour changing** I know the grass you get in saline areas is not like normal grass but I wanted mine to look healthier so under the HSL/Color/B&W tab, I tinkered with the Hue, Saturation and Luminance sliders of Orange, Yellow and Green. This is obviously a matter of subjectivity.



**6 Final step** I didn't want to do much more but under Presence I did tweak Clarity, Vibrance and Saturation to +48, +14 and +12 respectively. I finished with a tiny bit (-10) of Post Crop Vignetting just to tone down the corners and that was it, all done.





Coloratti ©Vincent Versace

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# BUILT TO LAST

*Do professional cameras need to be big and bulky to stand up to rough treatment? Mark Humpage thinks not, having just completed a gruelling assignment in Iceland, shooting with the redoubtable Olympus E-M1*

Mark Humpage would, you think, be a camera manufacturer's worst nightmare. A self-styled elemental photographer – it means someone who ventures into some of the most challenging environments on the planet – Mark puts both himself and his gear through hell and back, regularly getting roasted, soaked and covered in mud, grime, grit and dust. The pictures he comes back with are sensational, but no regular camera could cope with what's thrown at it without giving up the ghost.

Fortunately the exceptional weatherproofing and robust nature of the Olympus pro-spec camera range means it's more than up to the challenge – in fact, it's proved itself to be as tough as Mark. However, pleased though he's been with the performance of his Olympus DSLRs, Mark is always looking for ways to cut down on the size and weight of his kit, and the launch of the new E-M1 appeared to offer an opportunity for him to downsize while still maintaining quality. The burning question, however, was: could the smaller system still handle the mistreatment?

There was only one way to find out, and so Mark set up a shoot in Iceland: a sink or swim test for the new model. If it really could cope with the extremes of this place then the chances were it could handle just about anything. The gauntlet

had been thrown down, and only time would tell whether a CSC really could prove itself the equal of a full-size DSLR.

And it was size that struck Mark first when his E-M1 arrived. "When I first opened the box I couldn't believe quite how compact and lightweight this new Olympus flagship actually was," he says. "After sliding in a battery and powering it up I knew I was holding something special in my hands. I recall a similar moment when I first picked up the E-1: the E-M1 just felt so light yet so easy to hold, and I immediately appreciated its ergonomic design.

"Equally, it quickly became apparent that its wealth of features were easily accessible via the buttons, dials and levers, and I could see that it would be possible for the user to pretty much take total control, without the need for constant menu flicking – a huge plus point. Although I had yet to use it in anger it just 'felt' like it had what it takes to withstand the elements. I'd read the literature and seen Olympus was claiming it was water, dust and freeze proof, and now I was looking forward to giving it a real test."

## Facing the wilderness

This was to be Mark's third trip to Iceland, a destination he's come to love. "Spectacular and dramatic best describe

the place," he says. "It's totally natural and a real outdoor photographer's playground.

"A few days prior to me travelling a change of itinerary was enforced by the weather. Clear skies were being forecast for southern Iceland – a big draw for me. As well as giving me the best chance to shoot clear pictures of the Aurora, I could also test out the low-light capabilities of the E-M1 by shooting star trails, and so I decided this was where I was going to head."

Arriving in the capital Reykjavik, Mark headed east, stopping at the Blue Lagoon geothermal pools, numerous waterfalls, the famous Eyjafjallajökull volcano and a glacier along the way. In total a full and active four days were planned, and as well as providing opportunities for great pictures, the idea was for the individual shooting scenarios to be as testing as possible.

"The conditions were just how I like them," Mark confirms with a smile. "It was an ideal test for a camera that sells itself as water, dust and freeze proof. The weather was quite cold; it reached -6°C at worst overnight. This was challenging, especially when shooting at all hours throughout the night trying to capture the Aurora and the stars.

"The locations themselves were also very testing. For example, the geothermal pool is nothing short of a nightmare for camera equipment: milky blue water, rich in minerals like silica and sulphur, and constantly oozing steam – not the usual conditions one would take a camera to. But perfect for me, and in with the E-M1 I went! Meanwhile the huge waterfalls are some of the largest and most powerful in Europe, and when you get up close and personal the water and spray soaks (and I mean SOAKS) everything – another stern test.

"During the trip I also ventured onto a glacier. The huge swathe of volcanic rock and ice is quite an impressive sight. Add to this a stiff arctic wind, with freezing temperatures, and this too was quite a challenging shoot. I was like a kid in a sweet shop during the entire trip, and on the whole I would say the entire shoot was a stiff challenge for me and my gear."







**IMAGES** Small and lightweight it may be but the E-M1 is no delicate piece of kit, as Mark Humpage discovered on his adventures in Iceland.

### Emerging unscathed

Ok, let's cut to the chase: how did the E-M1 stand up to the challenge? Maybe the best answer lies in the images: Mark came home with amazing shots and no camera malfunctions, and yet these were circumstances that would have defeated all but the sturdiest of gear. Not only that, but the all-round performance of the new flagship hugely endeared it to the photographer, while giving him a much reduced bag of kit to carry around.

"Size and weight are key factors for my work tool choice," he says. "I travel a lot and the portability of the E-M1 together with the Micro Four Thirds compatible lenses means a smaller/lighter bag. On a typical shoot I am also running around at pace a fair bit and the portability makes my life so much easier. I speak with many DSLR photographers who perceive bulk as beautiful: well, not me!

"Small doesn't mean delicate, however: at one stage the wind caught the camera on its carbon fibre tripod and blew it clean over. I watched it bounce along the car park like a balloon in the wind, not a pretty sight. The 75-300mm lens was lying on the floor in pieces and the E-M1 looked the worse for wear. I wasn't far from tears. The lens proved beyond repair but the E-M1, amazingly, still worked fine, albeit scratched, cracked and dented, and I was able to complete the last shoot of the trip."

In terms of impressive features, Mark singles out the improved EVF, which he considers is now as good as that on a traditional mirrored unit; the Live Time/Bulb function, which proved invaluable when shooting stars and the Aurora; and the time lapse facility, which enabled him to record dramatic footage of clouds scudding across the sky. However, one thing that impressed Mark over and above everything else was the quality of the images.

"Once I started to process my Iceland gallery I was taken aback by the edge-to-edge clarity and colour definition," he says. "The images reflected the truth, which is so important for my elemental

work. The quality of images from this camera is simply stunning. I have to say that they are the best I have yet witnessed from an Olympus camera."

A resounding seal of approval then from a photographer who doesn't mince his words. In Mark's opinion the new E-M1 has earned its spurs the hard way, and from now on it's going to be the prime camera in his gadget bag.

→ Watch video of Mark's Icelandic trip here: <http://youtu.be/k1QkNy3rDbU>

**“The geothermal pool is nothing short of a nightmare for camera equipment... in with the E-M1 I went!”**

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# Photo Kit

INDEPENDENT REVIEWS OF ALL THINGS PHOTOGRAPHIC

PHOTOGRAPHIC EQUIPMENT is naturally very important to advanced photographers and therefore also very important to *Advanced Photographer* magazine – so every issue we'll be reviewing a wide variety of the latest photo kit.

We'll be including items that are relevant to the main technique features in each issue so cameras and lenses will feature heavily, but so too will accessories and software.



Look out for this badge of honour in our comparison tests

## 64 SONY A7

Full-frame image quality in a tiny body, that's the headline appeal of this CSC from Sony.

## 73

### TELEZOOM LENSES

How do these four third-party optics measure up? For value for money, each rates really highly but which one emerges triumphant in our review?

## 82 NIKON DF

An interesting mix of retro styling and bang up-to-date technology, the 16-megapixel Df certainly poses a conundrum for tech writer Ian: whether to follow his head or his heart.

## 90 DXO PRO V9

Autocorrection of distortion and lens aberrations plus amazing noise reduction skills could make this software your best friend.



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\*Similarly priced DSLR vs. LUMIX G6, correct as at 14/06/13.



# FULL TEST Sony A7

*It was only a matter of time before full-frame went mirrorless, and Sony is the first to do it. Ian Fyfe finds out what happens when you squeeze a huge sensor into a tiny body*

WORDS & PICTURES IAN FYFE



## KEY FEATURES

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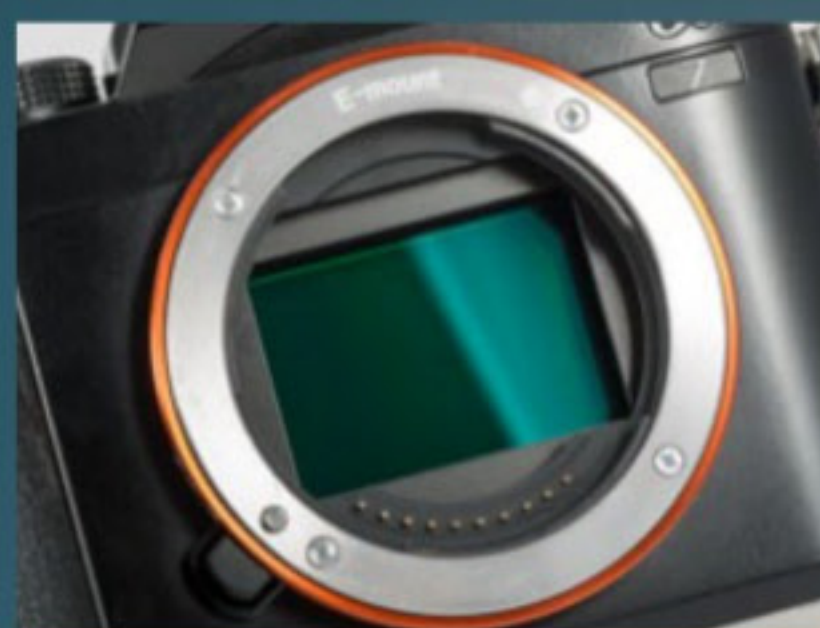
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**FULL FRAME** It's a stunning sight to take the lens off the A7 and see the huge, mirrorless 35mm format sensor. The A7 sensor has 24.3 megapixels, and in the Fast Hybrid AF system, phase-detection pixels are included on the sensor. Although the sensor is exposed, the A7 does use physical shutter curtains. The first curtain can be switched to electronic, which reduces noise, but the second shutter curtain is always physical.



**STORAGE OPTIONS** The A7 can accept SD cards or Sony's proprietary Memory Sticks, but this is via a single multi-functional slot, so you can only have one card in at any given time. Rather than being on the side of the camera, the slot is on the back, and you push the card in forwards – presumably this keeps the size of the camera as small as possible.



**MENUS** The options in Sony's menus are extensive, but they're well organised so easy to navigate. There are six main tabs, each of which has its own sub-tabs that are numbered, and you can navigate sideways at either of these levels so you never have to scroll through a load of options to find what you want. It's just a case of getting to know under which tab each of the options sits.



Less than 18 months ago, full-frame photography involved lugging around a bulky DSLR. That changed with lighter and more compact models like the Nikon D600 and Canon EOS 6D, but now Sony has taken full-frame miniaturisation to a new level with a duo of mirrorless interchangeable-lens, full-frame cameras.

The A7 is the cheaper of the two (£1299 body only, compared with £1699 for the A7R), and has a lower resolution than the A7R's 36 megapixels, although it's still a very handy 24 megapixels to rival the likes of the Nikon D610. The other main difference is actually an advantage to the A7, because it has a hybrid AF system that includes on-sensor phase-detection pixels. We'll look more closely at the A7R in the next issue of *Advanced Photographer*, but other than the resolution and focusing, the two cameras are practically identical – most of what's said about the A7 applies to the A7R too.

Of course, with a full-frame camera, image quality is the acid test because the expectations in these terms are so high. And when it comes to this, there's absolutely nothing to complain about with the A7. It's no secret that Sony is a leader in sensor technology, and in this case it shows – detail is incredibly sharp and clear, which is also a testament to the new E-mount 28-70mm f/3.5-5.6 lens that I was using. Not only that, but metering was excellent throughout, and in over 400 images taken with the camera, I never needed to add exposure compensation. In these fundamentals, Sony has most definitely got it right.

When it comes to handling, it's a bit more of a mixed bag. A small body can mean cramped handling, but the A7 avoids this. This is partly down to the grip, which is extremely comfortable to hold without being too big – it's moulded nicely for your hand, and is just about big enough to get your little finger on the bottom. Where the A7 is also fantastic is in the customisation options for the controls. As well as three custom buttons, another seven of the preset buttons can be reassigned. Each button has a choice of 46 functions, and the control wheel can be assigned to one of four, so you really can set things up exactly as you want. One button that can't be customised is the Fn button, which opens the on-screen menu for quick access to more settings. But while the button can't be customised, the menu itself can – it's a grid of 12 items, and you can select exactly which function goes where.

Not everything about the handling of the A7 is so smooth though. One problem I found is that the combined control wheel and directional pad on the back can easily be pressed when you're trying to turn it, and vice versa. For example, trying to →

## ANATOMY OF...

### Sony A7

#### FROM THE TOP

The on/off switch is around the shutter button **1**, making it easy to flick when holding it by the grip. The mode dial **2** includes two custom settings and panorama mode, as well as everything else you'd expect. It doesn't lock, but is sheltered so shouldn't get knocked too easily. An exposure compensation dial **3** on the corner is more vulnerable to knocks. Also under your shutter finger is a programmable custom button **4**. On top of the pentaprism-like viewfinder unit, there's a standard hotshoe **5**, while the only feature on the left shoulder is the stereo microphone **6**.

#### FROM THE FRONT

The handgrip **1** is wide and moulded with indentations on the inner edge, giving you plenty to get hold of. It feels nice too with a leather-like texture. The grip is topped off by the front command dial **2**, which is perfectly placed for your shutter finger. Near to this is the AF-assist lamp **3**, but otherwise the front of the camera is clean. The 35mm sensor **4** has 24.3 megapixels and features a hybrid autofocus system that includes 117 phase-detection AF points in the central region, an area similar in size to full-frame DSLR AF coverage.

#### FROM THE BACK

The LCD screen **1** tilts vertically, but is tucked in so adds no bulk. Above this is an electronic viewfinder **2** with an automatic eye sensor. The back command dial **3** is nestled into a strip that's set back from the rest of the backplate, alongside a second custom button **4**. Below this, a dual function button **5** for switching between AF and MF for AEL is altered using the lever that surrounds it. The Fn button **6** opens the on-screen quick menu, while the multi-selector **7** is both a keypad and a wheel. The SD card slot cover **8** effectively makes up the bottom of the hand grip.



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**SHUTTER** 30secs-1/8000sec  
**METERING PATTERNS** Multi segment, centre-weighted, spot  
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**DIMENSIONS (WXHxD)** 126.9x94.4x48.2mm  
**WEIGHT** 474g (incl. battery and card)



## “The highlight of the handling is the viewfinder – its magnification matches many full-frame DSLRs and it gives you a crystal clear preview”

press the directional keys to move the AF area, I accidentally turned the wheel and started changing the AF area selection method before I realised what I was doing. The camera can also be slow to respond, and this is summed up by the start-up time – it takes a full two seconds from flicking the switch to being ready to shoot. There's also a noticeable lag in the on-screen display when changing settings with the dial – change the aperture, for example, and the sliding scale that's displayed on-screen is always a beat behind.

Although not a problem that affects handling negatively, the arrangement of the dial functions is also slightly odd. In aperture-priority and shutter-priority modes, both command dials control the main setting. There's a separate dial for exposure compensation, and this wouldn't be necessary if one of the command dials controlled this. I'd have preferred to do without the exposure compensation dial, particularly because it's slightly vulnerable to knocks that add unintentional compensation, and it also has a limited range – it only allows +/-3EV adjustment when the camera's capable of +/-5EV, and you need to go into the menu to use the extra 2EV either end.

Perhaps the highlight of the handling is the viewfinder. It's electronic of course, but has a magnification of 0.71x, matching many full-frame DSLRs, there's hardly any lag and it gives you a crystal clear preview of your shot, even down to the effects of features like dynamic range optimisation if you're using them. There's a slight delay in the automatic eye sensor activation, but I've certainly seen worse, and once you've

got it to your eye, there's no need to take it away even if you need to change settings – across the bottom, the settings you'd expect in a DSLR viewfinder are displayed, and there are more across the top. If you need to enter the quick menu or even the full menu to change any settings, you can still do it because the viewfinder screen displays them in the same way as the main LCD, and the buttons are all easy to find by touch.

One thing I was particularly excited about with Sony's mirrorless full-frame cameras was their advantage in street photography, where the small body helps you stay inconspicuous without compromising on image quality – the same applies to weddings and events. In this way, the body size delivers, but what I found disappointing was the clunk of the shutter mechanism, which seems louder than most DSLRs. Unless you're far enough away to need a lens that negates the point of having a small body, the sound is certain to turn your subject's head and draw attention to yourself. The A7 has the option of an electronic or physical first shutter curtain, and using the former minimises the sound, but the second curtain is always physical and it's not discreet.

Without a mirror, matching the focusing standards of other full-frame cameras was always going to be a challenge. To get as close as possible, Sony has included 117 phase-detection AF points in the central area of the sensor to work alongside the contrast-detection AF system – you can display the area in which the phase-detection AF is active on-screen or in the viewfinder too. Coverage is much the same as the AF points in a full-frame DSLR.

In good light, the A7 focuses quickly and reliably – it's certainly not as speedy as a DSLR, but it's as good as most CSCs, and the lens movement is direct and efficient. On occasion, it did miss focus, either failing to lock on or sometimes thinking it had locked on when the subject under the focus point was not sharp – this was rare though. AF is helped by the pre-AF function, which is effectively an automatic continuous AF that gets the lens in pretty much the right place before you touch the shutter button. You can turn this off if you prefer, but it does speed things up a touch.

The A7 focusing system has a minimum sensitivity of 0EV, while most full-frame DSLRs go down to -1 or -2EV, and this difference shows. In low light, the A7 focusing slowed down considerably, with plenty of hunting, and it struggled to find focus at all in low light levels that still wouldn't pose a problem to most DSLRs. It's worth pointing out though that you can get an A-mount adaptor that includes a translucent mirror, effectively turning the A7 into a DSLT with full phase-detection AF, but still with the advantage of the compact body.

If you're focusing manually, focus peaking is excellent – this highlights sharp edges with a choice of red, yellow or white, and you can set the peaking level to low, medium or high. You can also choose to have the image magnified on-screen when you turn the focusing ring, and a defined area can be magnified. If you go for the non-magnified option, then the accuracy of focus peaking is difficult to judge when using a shallow depth-of-field, but add in magnification, and it's easy to get it spot on. There's also the option of direct manual focusing, which uses autofocus until the shutter button is half pressed, when you can fine-tune manually with the aids.

One last thing worth mentioning is battery life – the small body limits battery size, and one full charge gave us just a little over 300 shots. If you're planning to be out for the day, then a spare is probably necessary. Also be aware that a mains charger isn't included in the box, so unless you shell out for one separately, you'll have to make do with slow USB charging.



**LEFT** Exposures were extremely consistent, even in tricky lighting conditions like this. Taken with a 28-70mm, 1/800sec at f/8

**ABOVE RIGHT** The excellent sensor gives a huge amount of fine detail in A7 images. Taken with a 28-70mm, 1/400sec at f/11

**BOTTOM LEFT** In practice, it's possible to push the ISO sensitivity up without too much impact on quality – this shot was taken at ISO 3200. Taken with a 28-70mm, 1/40sec at f/5.6

**BOTTOM RIGHT** Colours are strong and the A7's auto white-balance system kept them accurate. Taken with a 28-70mm, 1/40sec at f/8









## ISO performance

Surprisingly, grain is noticeable at as low as ISO 200 if you look at the images at their full size, although it's not a problem at this level. In fact, grain is very fine up

to ISO 1600, so below this has very little impact on the image. From ISO 3200, grain is coarser and diminishes detail more noticeably, and the top two settings

of ISO 12,800 and 25,600 suffer badly. What's good though is that overall colour remains consistent throughout the range, even to the very top end.



## IMAGE QUALITY

Overall, image quality from the A7 is exceptionally high. Using the 28-70mm f/3.5-5.6 lens, the A7 certainly records a huge amount of detail, and at their best the images are extremely crisp and clear. JPEG images can suffer slightly from a little blockiness

where there's a lot of fine detail or subtle colour gradients, although this is being extremely critical, and otherwise the in-camera processing does a fantastic job. Raw files don't suffer in the same way though, and although they're much softer than JPEGs

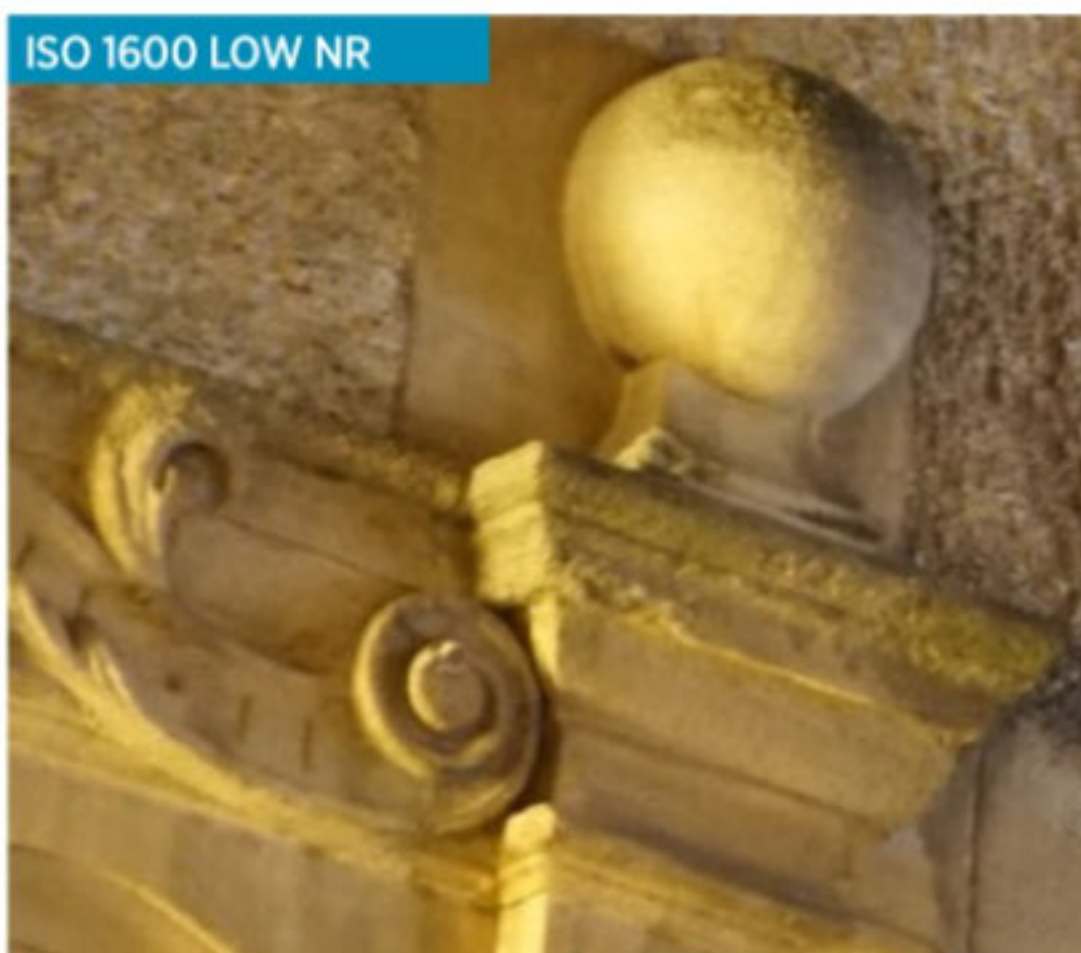
straight out of the camera, sharpening in Lightroom produces final results that are considerably better. The only concern was a few jagged edges in one or two Raw files, but this was rare and they were smoothed out in the corresponding JPEGs.



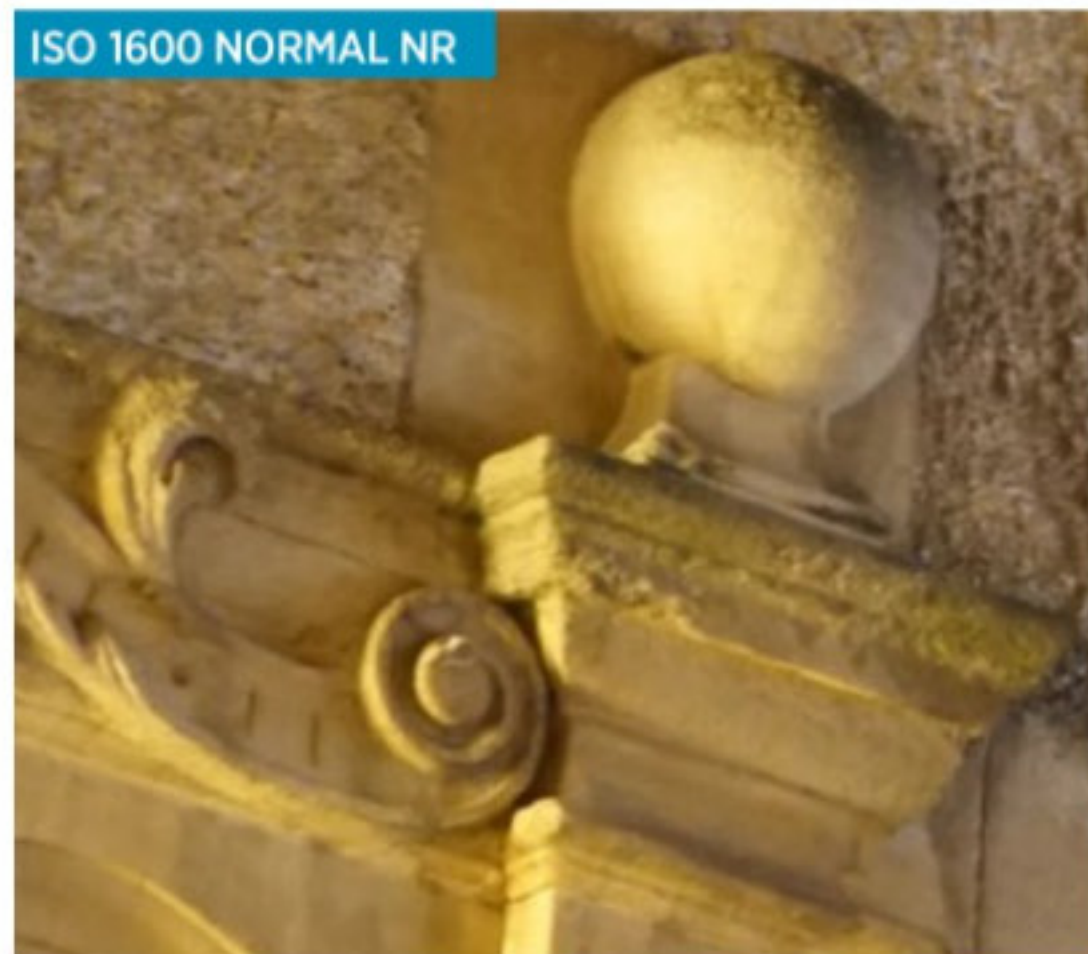
ISO 1600 NO NR



ISO 1600 LOW NR



ISO 1600 NORMAL NR



ISO 25,600 NO NR



ISO 25,600 LOW NR



ISO 25,600 NORMAL NR



## Noise reduction

Noise in JPEGs causes speckling artefacts, but you can elect to use high ISO noise reduction to reduce these. You can choose Low and Normal noise reduction to be applied to JPEGs shot alone or alongside

Raw files. There's little difference between the Low and Normal settings, but both do a good job of smoothing the speckling. At mid ISO levels of around 1600 and 3200, where noise starts to be a problem, this

improves JPEGs, but at higher ISO speeds, smoothing is at the expense of a lot of detail. At any ISO sensitivity though, you get better results by shooting Raw files and cleaning them up yourself in software.

NO HDR



AUTO HDR



HDR 1EV



HDR 2EV



HDR 3EV



HDR 4EV



HDR 5EV



HDR 6EV



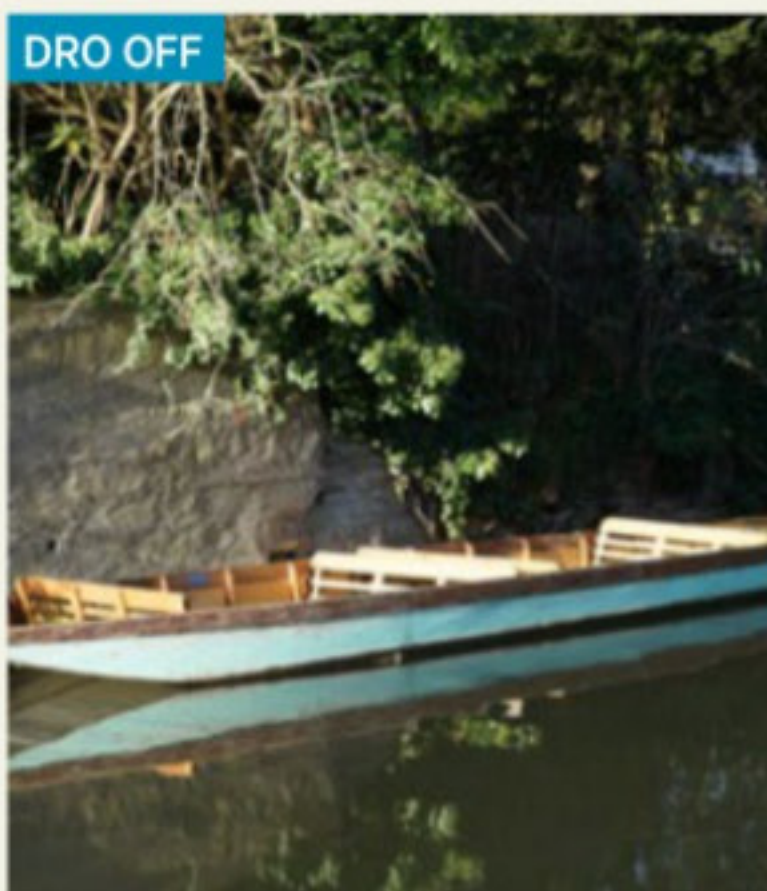
## HIGH DYNAMIC RANGE

For high-contrast scenes, you can use the Auto HDR function, which combines three JPEGs into one. There are seven settings for the exposure differential: auto, and each full EV from 1 to 6, so the maximum combines exposures of +/-3EV. It does an impressive job, and in fact you need to be careful because the most extreme settings start to make things look a little surreal. This mode is only available when you're shooting JPEG only, but regardless of the exposure differential setting you use, it records the normal exposure alongside the merged image.





DRO OFF



DRO AUTO



DRO LEVEL 1



DRO LEVEL 2



DRO LEVEL 3



DRO LEVEL 4



DRO LEVEL 5



## DYNAMIC RANGE OPTIMISATION

If you don't want to go to the extreme of using HDR, but want to pull in the shadows and highlights in a single JPEG shot, you can turn on

Dynamic Range Optimiser. You can leave this on auto, or you can select from five levels yourself. Even Level 1 has quite a large effect, and the

strongest settings can leave images looking washed out – there's a loss of saturation that you don't get in the HDR mode.





## Panorama

Panorama is a mode of its own directly accessible via the top dial, and lets you create a wide image by sweeping the camera around as it shoots continuously. I didn't find it as simple as it seems – you need to move the camera fast enough but not too fast, otherwise it doesn't work, and I found this speed of movement caused some blurring, even with a shutter speed of 1/100sec for each frame. When it gets it right though, it can save you a lot of time in front of the computer stitching frames together.

## PICTURE EFFECTS

The A7 lets you get creative with JPEG images in-camera, with a range of Creative Styles, which are subtle filters suited to certain types of scene, and Picture Effects, more arty filters that include things like HDR painting, Illustration, Partial Color, Soft Focus and Toy Camera.



## THE VERDICT

As a mirrorless camera, the obvious advantage of the A7 is its size. It's less than two thirds the weight of the Canon EOS 6D, the lightest full-frame DSLR, much more compact, and the image quality is easily as good, if not better than other full-frame options. It's also currently the cheapest full-frame camera available.

It's important to consider the system as a whole, and currently the range of dedicated E-mount full-frame lenses is limited. Until now, all E-mount cameras had APS-C sensors, so while the existing system is compatible, it's not built for full-frame. Sony is clearly looking to address this though and launched five new E-mount full-frame lenses alongside the A7

series, including 24-70mm f/4 and 28-70mm f/3.5-5.6 standard zooms, 35mm f/2.8 and 55mm f/1.8 Zeiss primes and a 70-200mm f/4. With an adaptor, you can also use A-mount lenses, which adds flexibility, and adaptors are available to fit, among others, Canon, Leica and Nikon lenses too.

There's no doubt that there are a few compromises in terms of handling and performance relative to a DSLR, in particular the responsiveness of the camera and the focusing, but the image quality certainly won't disappoint. Full-frame quality from a camera body that's small and light is probably most photographers' dream, and ultimately that's what the Sony A7 delivers.

## HOW IT RATES

### FEATURES **23/25**

Everything you would expect is there

### HANDLING **21/25**

Great customisation, but not the most responsive camera to use

### PERFORMANCE **23/25**

Delivers on image quality

### VALUE FOR MONEY **24/25**

Full-frame quality at its cheapest

### OVERALL **91/100**

You won't find a smaller camera with this kind of image quality

**PROS** Image quality, custom controls

**CONS** Responsiveness could be better





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### Sony E-series lenses

16mm f/2.8 Pancake	£195.00
20mm f/2.8	£294.00
24mm f/1.8 ZA Carl Zeiss Sonnar	£779.00
30mm f/3.5 Macro	£209.00
35mm f/1.8 OSS	£349.00
35mm f/2.8 ZA Sonnar T*	£699.00
50mm f/1.8 OSS	£239.00
55mm f/1.8 ZA Sonnar T*	£849.00
10-18mm f/4 OSS	£659.00
16-50mm f/3.5-5.6 OSS	£299.00
16-70mm f/4G ZA OSS	£839.00
18-55mm f/3.5-5.6 OSS	£249.00
18-105mm f/4G OSS	£499.00
18-200mm f/3.5-6.3 LE	£549.00
18-200mm f/3.5-6.3 Power Zoom	£999.00
24-70mm f/4 Vario-Tessar T*	£1,049.00
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70-200mm f/4 G OSS	See Web

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16mm f/2.8 Fisheye	£619.00
20mm f/2.8	£469.00
24mm f/2.0 Carl Zeiss Distagon T*	£989.00
30mm f/2.8 SAM 1:1 macro DT	£139.00
35mm f/1.4 G-Series	£1,129.00
35mm f/1.8 DT	£159.00
50mm f/1.4	£309.00
50mm f/1.4 Carl Zeiss	£1,239.00
50mm f/2.8 Macro	£449.00
50mm f/1.8 SAM Portrait lens DT	£149.00
85mm f/2.8 SAM DT	£159.00
85mm f/1.4 Carl Zeiss T*	£1,149.00
100mm f/2.8 Macro	£599.00
135mm f/1.8 Carl Zeiss T*	£1,199.00
135mm f/2.8 Special Purpose	£999.00
300mm f/2.8 G SSM II	£5,899.00
500mm f/4 G-Series	£12,499.00
11-18mm f4.5-5.6 DT	£498.00
16-35mm f/2.8 SSM Carl Zeiss T* DT	£1,459.00



16-50mm f/2.8 SSM DT	£499.00
16-80mm f/3.5-4.5 ZA Carl Zeiss T* DT	£599.00
16-105mm f/3.5-5.6 DT	£459.00
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70-300mm f/4.5-5.6 G-Series	£779.00
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## **PART TWO** **70-300mm telezooms**

*The 70-300mm telezoom offers a compelling combination of pulling power, portability and competitive price. In part 2 we look at four nicely priced independent offerings*

**WORDS & PICTURES** RICHARD HOPKINS

The most glamorous telephoto zoom you can buy is very probably the 70-200mm. In most camera or lens makers' product ranges the 70-200mm is usually the one blessed with a fast maximum aperture – usually f/2.8 – that is constant throughout the focal length range, is packed brimful of exotic glass for maximum quality and also happens to cost the most too.

By comparison, the 70-300mm is the plain Jane telephoto compared with the glamour puss specification of a top 70-200mm but to most photographers it's probably the better buy. Of course, money comes into it and the typical 70-300mm is significantly cheaper than the 70-200mm, more compact and it's also much, much lighter if weight is a consideration.

Leaving aside the benefit of a fast maximum and constant aperture for now, the 70-300mm is more versatile,

especially if you enjoy sports or nature work, where extra focal length is always a benefit. This is even more true on APS-C format cameras where the 1.5x (Nikon, Pentax, Sony) or 1.6x (Canon) crop factor makes a big difference.

Of course we can't ignore the maximum aperture issue for long and there is currently no 70-300mm f/2.8 – Olympus will have an equivalent 80-300mm f/2.8 later in 2014. If there were, it would be a seriously big, heavyweight lens with a suitably massive price tag. Instead what we have are 70-300mm zooms with a maximum aperture of f/4 or f/4.5 at the 70mm gradually slowing down to f/5.6 at the 300mm focal length. The slower aperture clearly makes its presence felt in low light conditions so upping the ISO is needed, but generally in good light the aperture factor is not an issue in terms of shooting sharp images. It does, however, come into play

if you want a very shallow depth-of-field and lovely bokeh where the f/4-5.6 maximum aperture does limit the effect.

Last month we tested three camera brand lenses, one from Nikon and two from Canon. The Nikon 70-300mm f/4.5-5.6 was the best although that fact will not interest Canon owners.

In this month's part two, we have lenses from independent lens maker brands Sigma and Tamron and their products are available in a variety of different camera fittings so by definition have a much wider appeal.

The other thing, naturally, is that the independent lenses are significantly cheaper than those from the camera brands. However, the lower price also means fewer exciting features such as ultrasonic focusing and image stabilisation, but that trade-off is not too much of an issue for many. Anyway, here's the test.



## KEY FEATURES

**BARGAIN LOW PRICE** **MACRO FOCUSING DOWN TO 1:2 SMALL**  
**AND LIGHTWEIGHT** **CANON, NIKON, PENTAX, SIGMA, SONY**  
**FITTINGS** STREET PRICE £100

# Sigma

## 70-300mm f/4-5.6 DG Macro



There are not many lenses of any description that can be had for £100. Maybe a kit zoom or 50mm f/1.8 thrifty-fifty, but very few others. We actually have two here, the cheaper of the Tamrons reviewed over the page, and this Sigma 70-300mm f/4-5.6 DG Macro.

Apart from the bargain price, the Sigma's other unusual feature is very close focusing down to 1:2 magnification, coincidentally like the Tamron and also the Sigma APO version. The APO version is identical apart from having a couple of extra SLD elements, and costing £50 more.

### SIGMA 70-300MM

**STREET PRICE** £100

**CONTACT** [www.sigma-imaging-uk.com](http://www.sigma-imaging-uk.com)

**FORMAT** Full-frame and APS-C

**FOCAL LENGTH** 70-300mm,  
APS-C equivalent 105-450mm 1.5x; 112-480mm 1.6x

**OPTICAL DESIGN** 14 elements in 10 groups

**PREMIUM ELEMENTS** 1x SLD glass

**APERTURE RANGE** f/4-5.6 to f/22-32

**DIAPHRAGM** 9 rounded blades

**ANGLE OF VIEW** Full-frame 34° to 8°  
(diagonally), APS-C 23° to 5° 1.5x; 22° to 5° 1.6x

**MINIMUM FOCUS** 0.95m from sensor

**MIN WORKING DIST** 0.69m from lens front

**MAX REPRODUCTION RATIO** 1:2

**AUTOFOCUS** Micro-motor drive

**MANUAL FOCUS** AF/M switch

**FOCUSING SCALE** Yes

**DEPTH OF FIELD SCALE** Yes, f/11 and f/22 at  
70mm only

**IMAGE STABILISATION** No

**ZOOM LOCK** No

**FILTER SIZE** 58mm (front rotates)

**TRIPOD COLLAR** Not available

**SIZE (DxL)** 77x122mm (207mm extended)

**WEIGHT** 545g

**ACCESSORIES** Hood supplied

**FITTINGS** Canon, Nikon, Pentax, Sigma,  
Sony-A



**ABOVE** It might be nothing special in its specification but optical performance is impressive for a £100 lens... close to other telezooms costing several times as much.

As you would expect, the specification is relatively spartan and does not include premium features like image stabilisation and ultrasonic focusing, and no luxuries like a non-rotating barrel, though Sigma does include a lens hood. Of those omissions, while image stabilisation is not exactly essential, it's certainly very useful at longer focal lengths.

The build quality is economy grade too, though perfectly serviceable. Finished in high quality engineering plastic, everything works pretty well though the zoom ring can be a little jerky during fine adjustments and there's some wobble when the barrel is fully extended by an extra 85mm in 1:2 macro mode. Manual focusing is good, smooth and lightly weighted, and as the barrel extends, a magnification scale is revealed for close up work, handily marked in ratios from 1:16.5 to 1:2.

Engaging macro mode is a little fiddly at first. It only works between 200-300mm, so first you must zoom to the long end,

then push the normal/macro switch over, and that allows the focusing ring to extend down from 1.5m to 0.95m, while also blocking the zoom from turning below 200mm. It's a good idea to change back to normal mode each time to save being caught out, but you soon get the hang of things and while macro-focusing zooms are no match for a dedicated prime macro lens for image quality, the convenience of having this feature to hand is very welcome. There's also the benefit of a generous 0.69m working distance at 300mm, measured from the lens front.

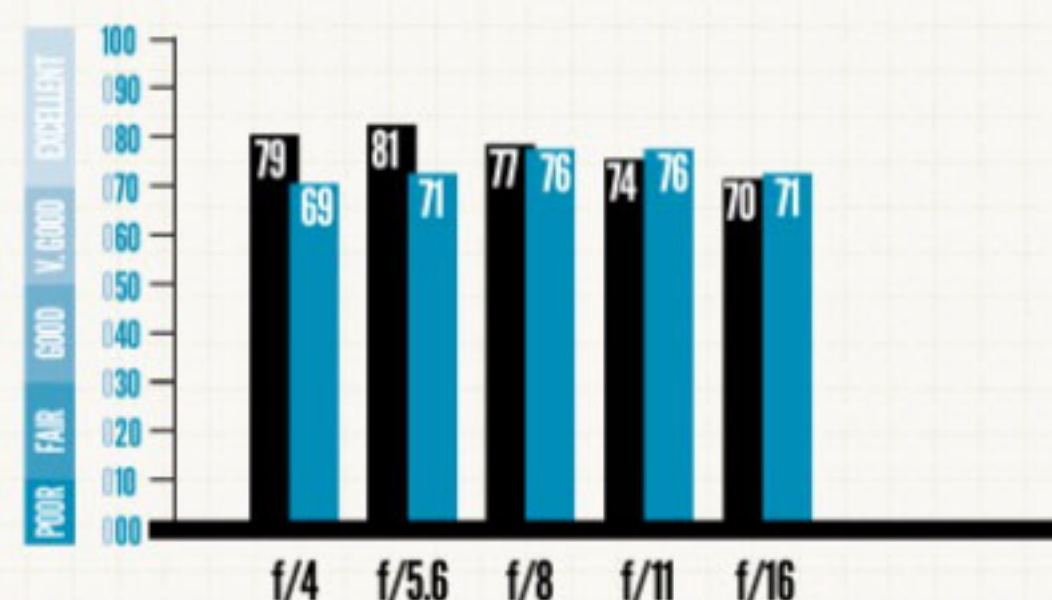
The micro-motor driven AF is quite swift in good light, not too noisy, and tested at 135mm it averaged 0.52 secs in the near-to-far speed test. It slows down and becomes more hesitant in low light, more so at 300mm where the maximum aperture drops to f/5.6.

Optical performance is impressive for a £100 lens, easily beating the similarly priced Tamron and close to

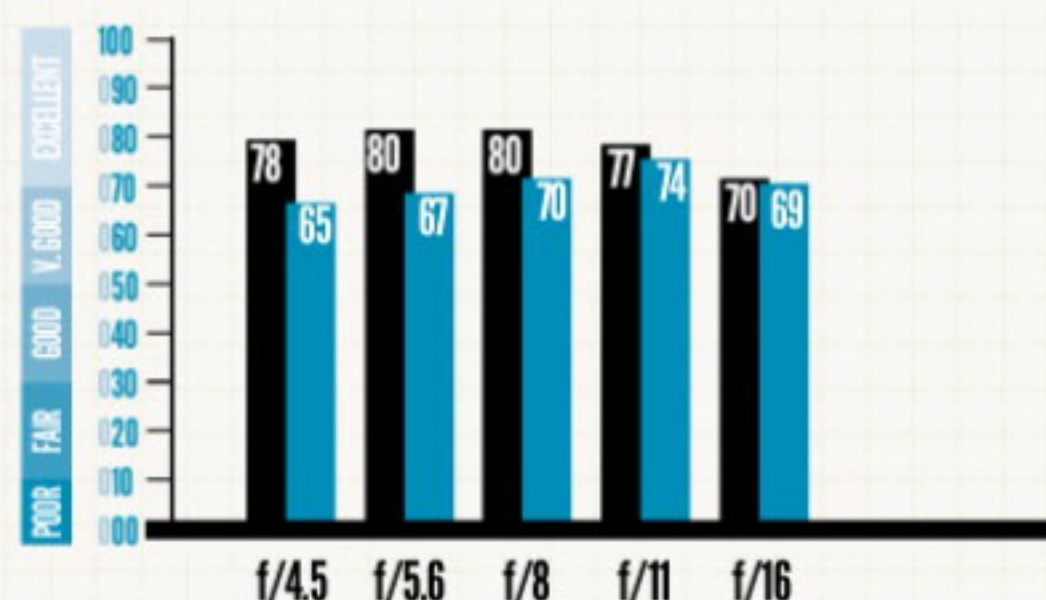


## SIGMA 70-300MM % MTF AT 24 LINES-PER-MM (FULL-FRAME)

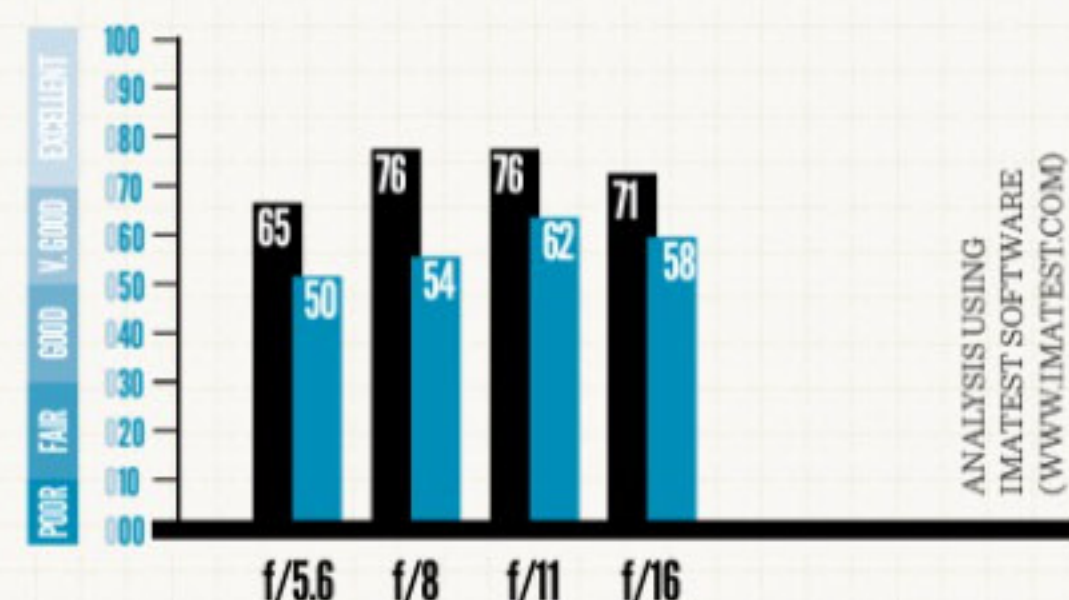
### Sharpness 70mm



### 135mm

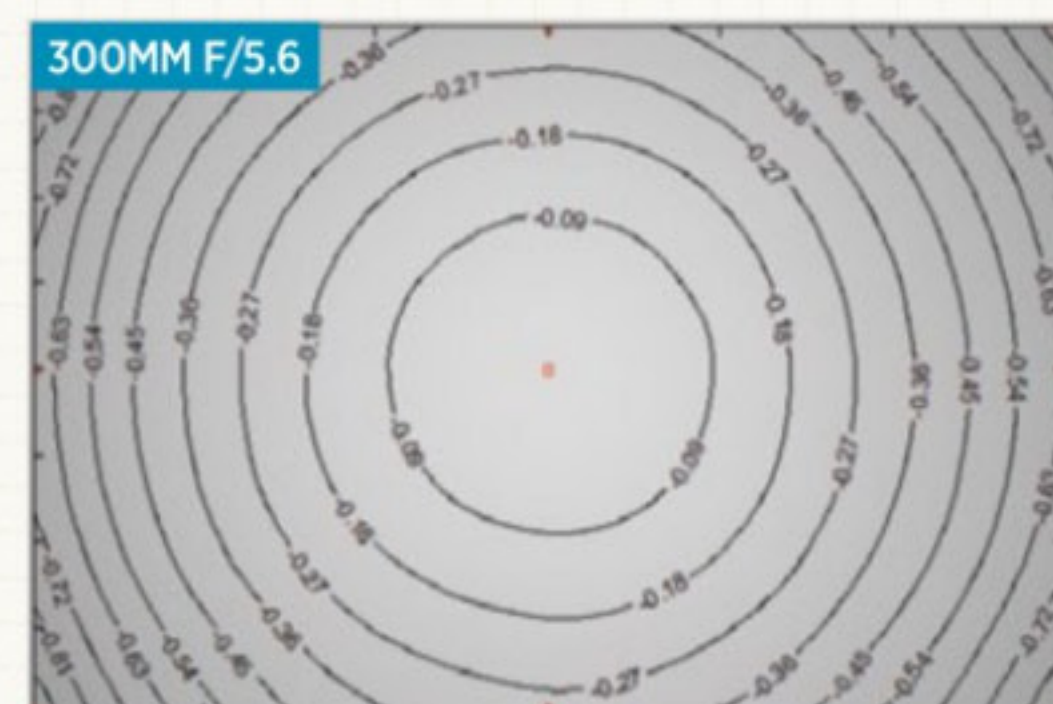
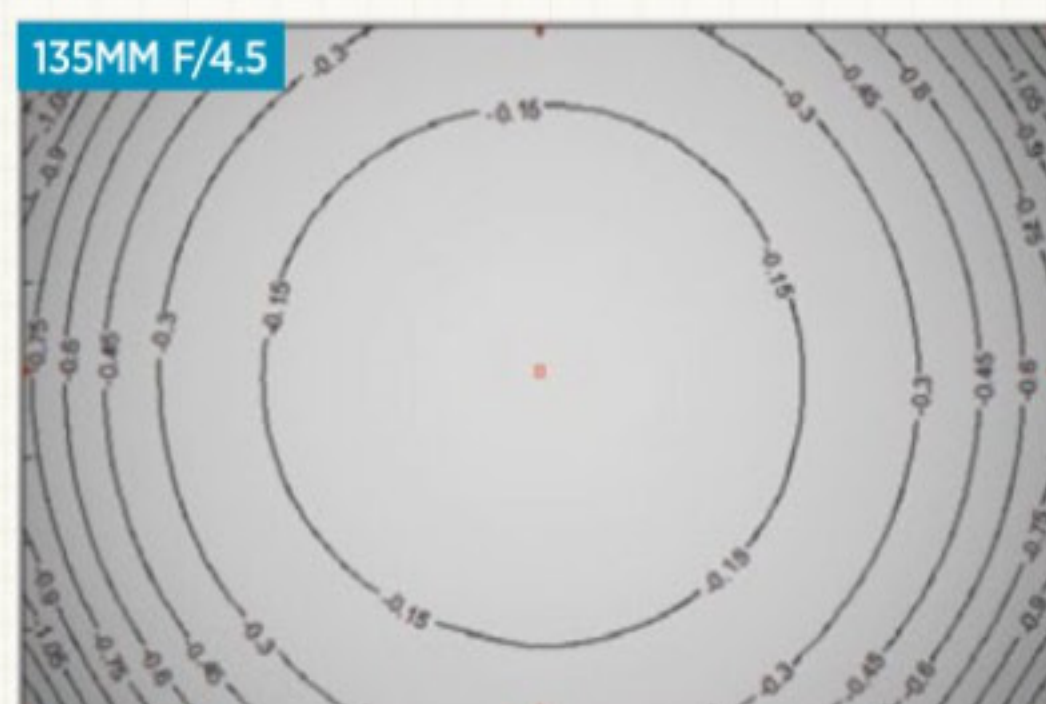
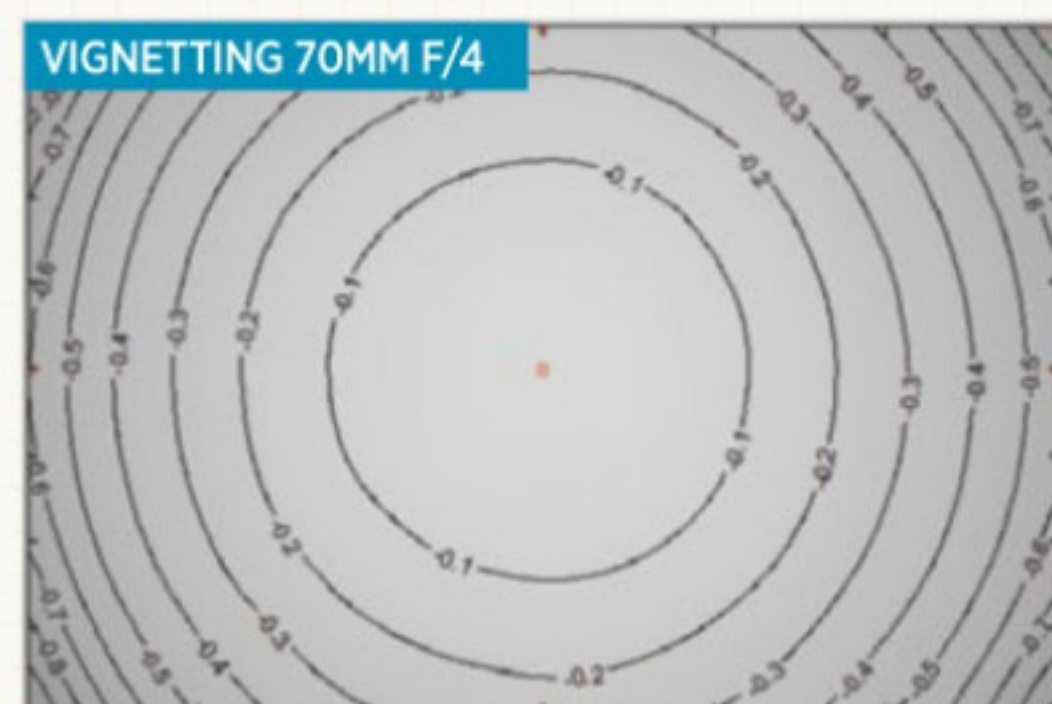


### 300mm

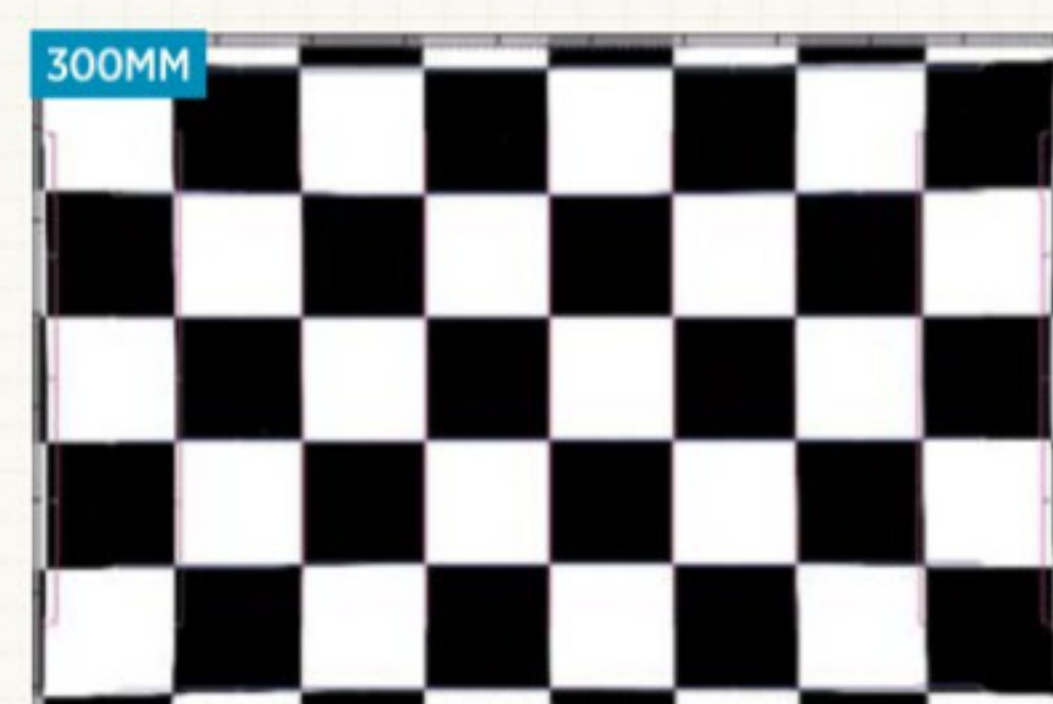
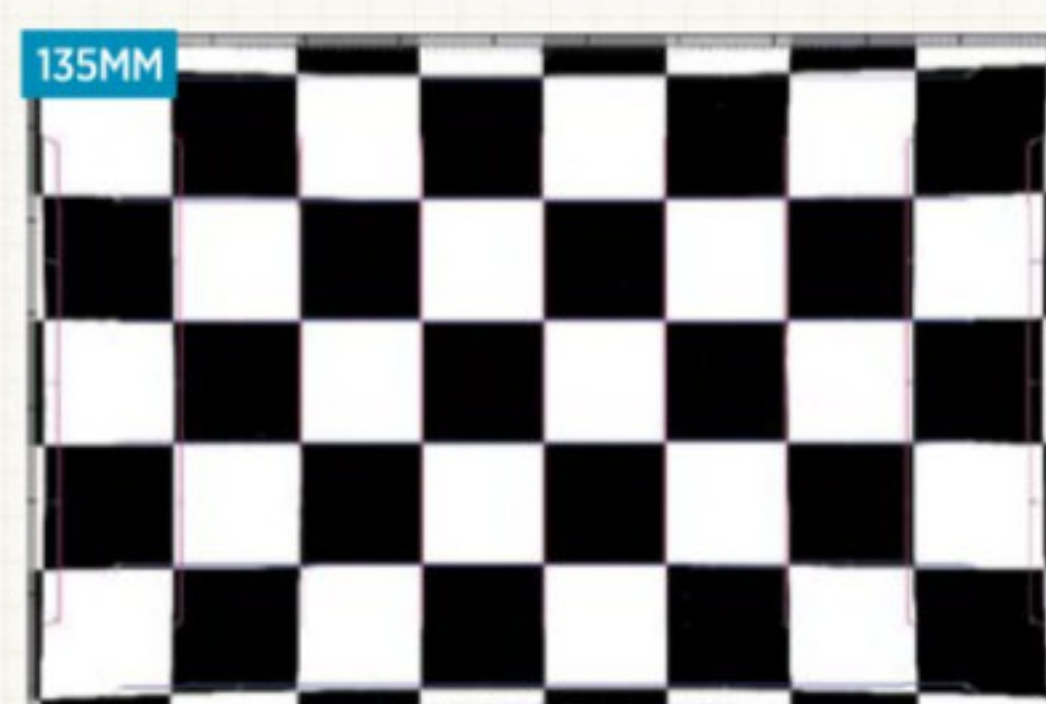
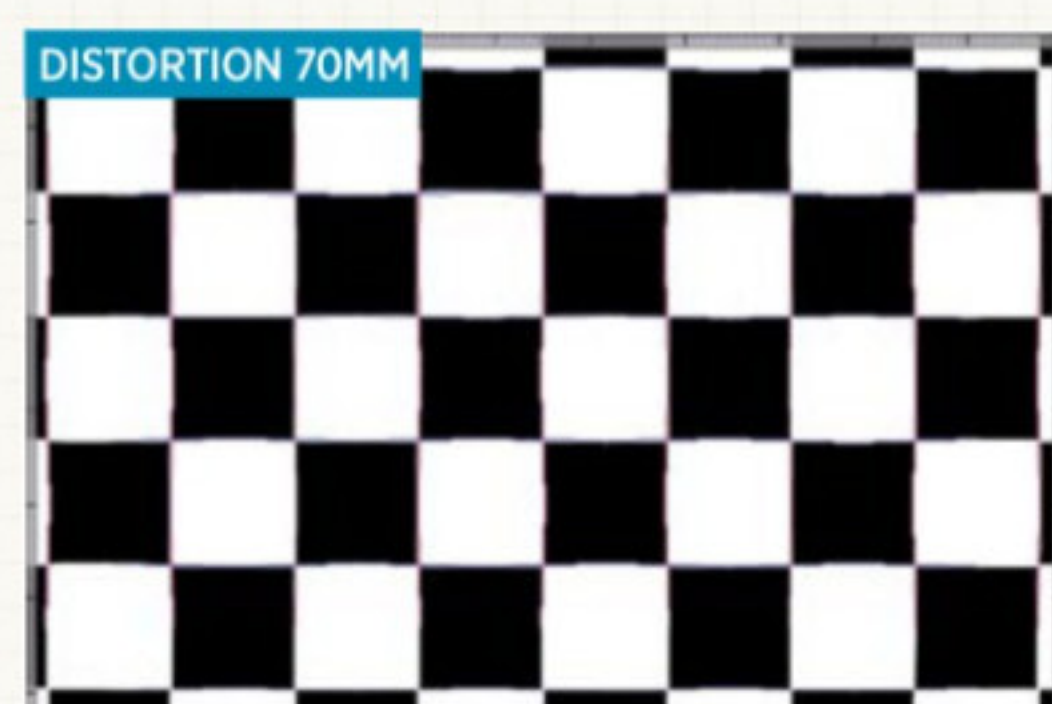


ANALYSIS USING  
IMATEST SOFTWARE  
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**ABOVE** Great performance for a £100 zoom, the Sigma 70-300mm f/4-5.6 DG Macro comfortably beats the similarly priced Tamron. In the centre at 70mm and 135mm, sharpness is never less than Excellent. The edges are not far behind and also reach Excellent from f/8. As usual, sharpness dips at 300mm f/5.6, but the centre picks up well at f/8. CA is always present at the edges, steadily increasing with focal length, rating Fair overall.



**ABOVE** Vignetting is usually not much of a problem with telezooms. At maximum aperture in the corners, on full-frame, vignetting just meets the Excellent standard with a score of 1.0EV at 70mm, rising to 1.5EV at 135mm (Very Good) and reducing to 0.9EV at 300mm (Excellent). Raising the f/number one stop reduces vignetting to barely noticeable levels, to score Excellent overall.



**ABOVE** At 70mm on full-frame, distortion registers a hardly visible +0.4% barrel (Excellent). This changes dramatically at 135mm, having switched to strong pincushion -3.1% (Poor), then easing down to -2.1% pincushion at 300mm (Poor). Overall average rating Fair.

other telezooms costing several times as much. In the centre at 70mm and 135mm, sharpness rates as Excellent all the way from maximum to minimum aperture. The edges are not too far behind either, breaking above the Excellent line from mid-range apertures. Typically, it's not so good at 300mm, particularly at the edges, and while centre sharpness picks up well from f/8, the edges always lag somewhat.

You don't need to look too hard to see some chromatic aberration, that rates as Very Good towards the edges at 70mm, worsening to Fair at 135mm and then Poor at 300mm - scoring Fair overall. There's mild barrel distortion at 70mm, but this quickly switches to strong pincushioning at 135mm and it's much the same at 300mm, rating Fair overall. Vignetting is generally not a problem, and while it's noticeable at 135mm f/4.5, overall it rates as Excellent.

## THE VERDICT

If you're on a tight budget, or only need a longer lens like this occasionally, then the Sigma 70-300mm f/4-5.6 DG Macro is a no brainer. At £100, it's a bargain.

Don't expect pro-grade build quality, or higher-end features like image stabilisation or ultrasonic AF, but the essentials are all here, and you get a lightweight telezoom that is very sharp at short and mid-range focal lengths, and only dips down at 300mm maximum aperture. And to be fair, they almost all do that.

This lens can hold its own in much more expensive company, with the handy bonus of 1:2 macro focusing ability thrown in. The identical-twin APO version is sharper, but there's so very little in it you might as well save yourself £50.

## HOW IT RATES

**FEATURES** **18/25**  
Just the essentials, no ultrasonic AF or image stabilisation. Handy 1:2 macro mode

**HANDLING** **23/25**  
Good overall, compact and light. Build quality decent, considering the price

**PERFORMANCE** **18/25**  
Remarkably sharp for a £100 lens. Micro-motor AF and no image stabilisation costs it a few points

**VALUE FOR MONEY** **25/25**  
A lot of picture power for the money. Top buy, no question

**OVERALL** **84/100**  
No-frills spec but the basics are all covered and the optics are great for the money

**PROS** Price, decent optics, macro mode

**CONS** Basic specification



## KEY FEATURES

MACRO FOCUSING DOWN TO 1:2 **SMALL AND LIGHTWEIGHT**  
INCLUDES 'APO' ELEMENTS **CANON, NIKON, PENTAX, SIGMA,**  
**SONY FITTINGS** STREET PRICE £150

# Sigma

## 70-300mm f/4-5.6 DG APO Macro



Apart from one thing, this Sigma 70-300mm f/4-5.6 DG APO Macro is identical to the non-APO version reviewed on the previous pages. APO is the abbreviation for apochromatic, and refers to three elements made from SLD glass, as opposed to just one in the non-APO design. SLD is Sigma's Special Low Dispersion type glass, meaning that all colours of visible light are more accurately focused to the same point, reducing the colour-fringing of chromatic aberration and improving sharpness.

A red ring around the front distinguishes the APO lens, and that is the

### SIGMA 70-300MM

**STREET PRICE** £150

**CONTACT** [www.sigma-imaging-uk.com](http://www.sigma-imaging-uk.com)

**FORMAT** Full-frame and APS-C

**FOCAL LENGTH** 70-300mm, APS-C 105-450mm 1.5x; 112-480mm 1.6x

**OPTICAL DESIGN** 14 elements in 10 groups

**PREMIUM ELEMENTS** 3x SLD glass

**APERTURE RANGE** f/4-5.6 to f/22-32

**DIAPHRAGM** 9 rounded blades

**ANGLE OF VIEW** Full-frame 34° to 8° (diagonally), APS-C 23° to 5° 1.5x; 22° to 5° 1.6x

**MINIMUM FOCUS** 0.95m from sensor

**MIN WORKING DIST** 0.69m from lens front

**MAX REPRODUCTION RATIO** 1:2

**AUTOFOCUS** Micro-motor drive

**MANUAL FOCUS** AF/M switch

**FOCUSING SCALE** Yes

**DEPTH OF FIELD SCALE** Yes, f/11 and f/22 at 70mm only

**IMAGE STABILISATION** No

**ZOOM LOCK** No

**FILTER SIZE** 58mm (front rotates)

**TRIPOD COLLAR** Not available

**WEATHER RESISTANT** No

**SIZE (DxL)** 77x122mm (207mm extended)

**WEIGHT** 550g

**ACCESSORIES** Hood and case supplied

**FITTINGS** Canon, Nikon, Pentax, Sigma, Sony-A



**ABOVE** APO is the abbreviation for apochromatic, and refers to three SLD (Special Low Dispersion) lens elements that are used to minimise chromatic aberration.

one external clue. The only other evidence is the weight goes up by a miniscule five grams (premium glass is heavier) and for the extra £50 the APO version costs, Sigma also includes a zippered case.

The overall design is also very like the Tamron 70-300mm f/4-5.6 Di LD Macro. Size and weight are similar, being quite compact and light, with no image stabilisation and AF drive by micro-motor rather than the more sophisticated ultrasonic type. There is also the same 'macro' function, taking the closest focus down to 0.95m and a reproduction ratio of 1:2 at 300mm focal length.

The outer barrel is 100% engineering-grade plastic and well finished. It extends a long way, up to 85mm longer in max macro mode, and unsurprisingly there is some play to be found. While performance is not affected by this at longer focal lengths, it feels a bit disconcerting. The macro function is only available between 200mm and 300mm, so to engage it the

focal length has to be extended first, then the normal/macro button switched over, and this allows the focusing ring to turn beyond the normal 1.5m mark and down to 0.95m. The barrel is marked with reproduction ratios from 1:16.5 to 1:2 and this is a handy reference tool. While macro performance can't compete with a true macro lens optimised for close working (as no macro-zoom can) there's no denying the usefulness of having this option to hand, especially when at 300mm the minimum working distance from the front of the lens is a very comfortable 69cm.

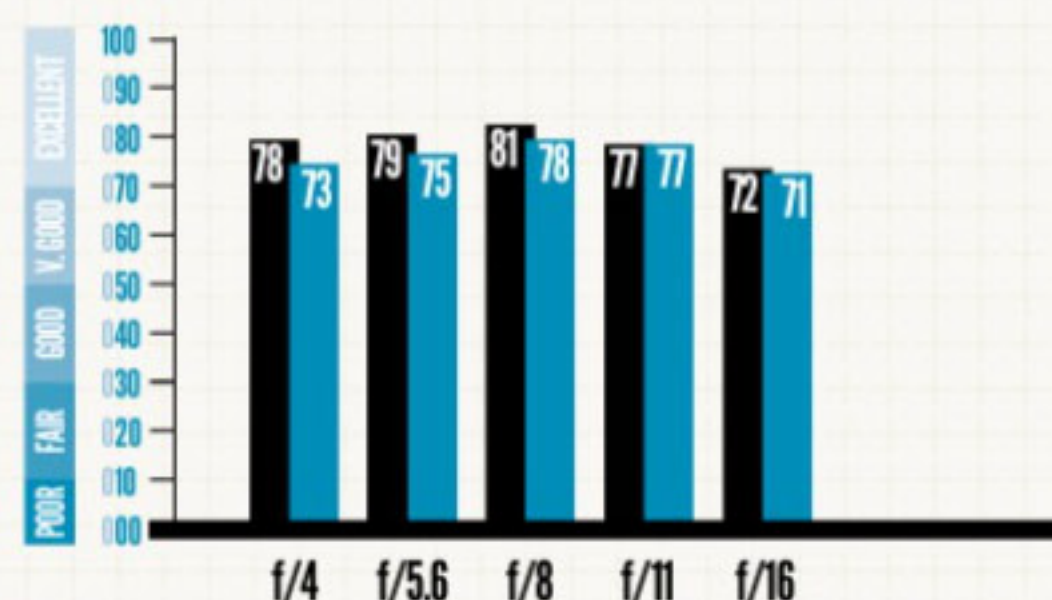
The AF speed is usually quite rapid, recording 0.52secs in the near-to-far speed test, and while the mechanism is certainly audible, it's not an obtrusive sound. The speed test was done in good light at 135mm, and as often happens with lenses of this type, it gets noticeably slower in low light, especially at longer focal lengths.

With the promise of APO lens elements at work, we were hoping to see high optical

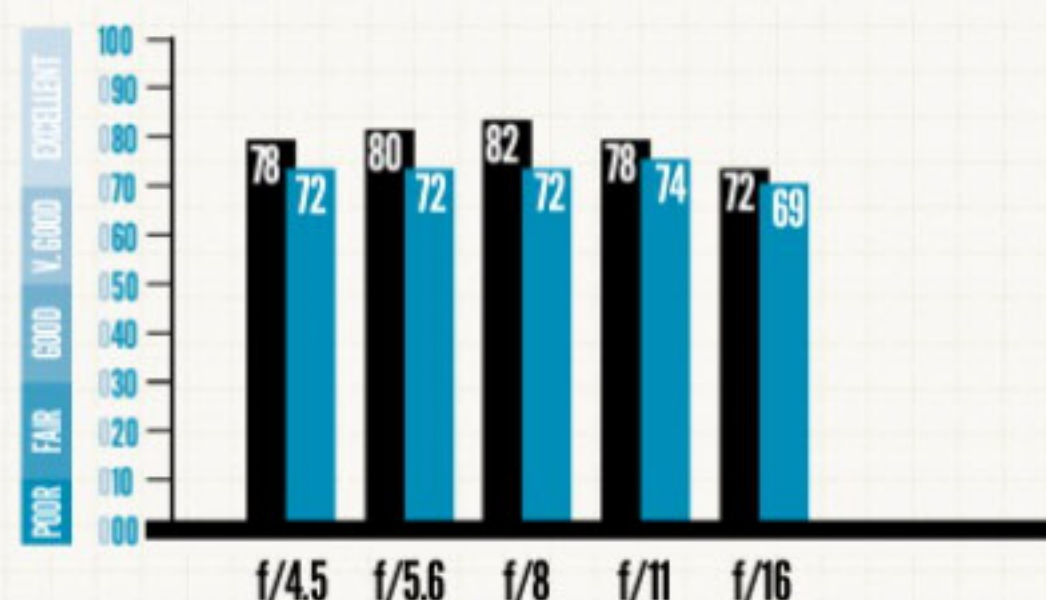


## SIGMA 70-300MM % MTF AT 24 LINES-PER-MM (FULL-FRAME)

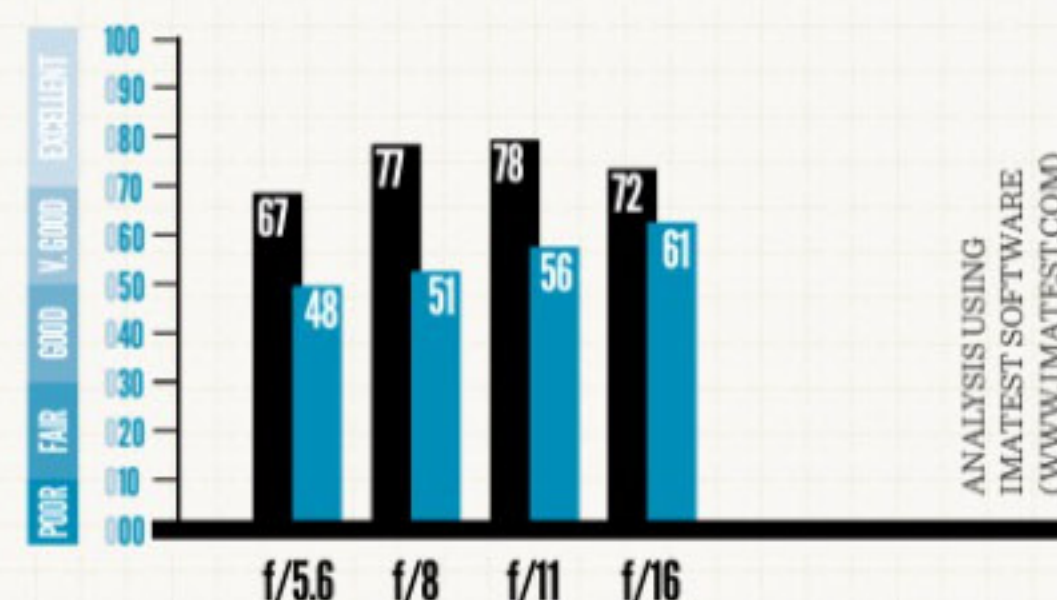
### Sharpness 70mm



### 135mm

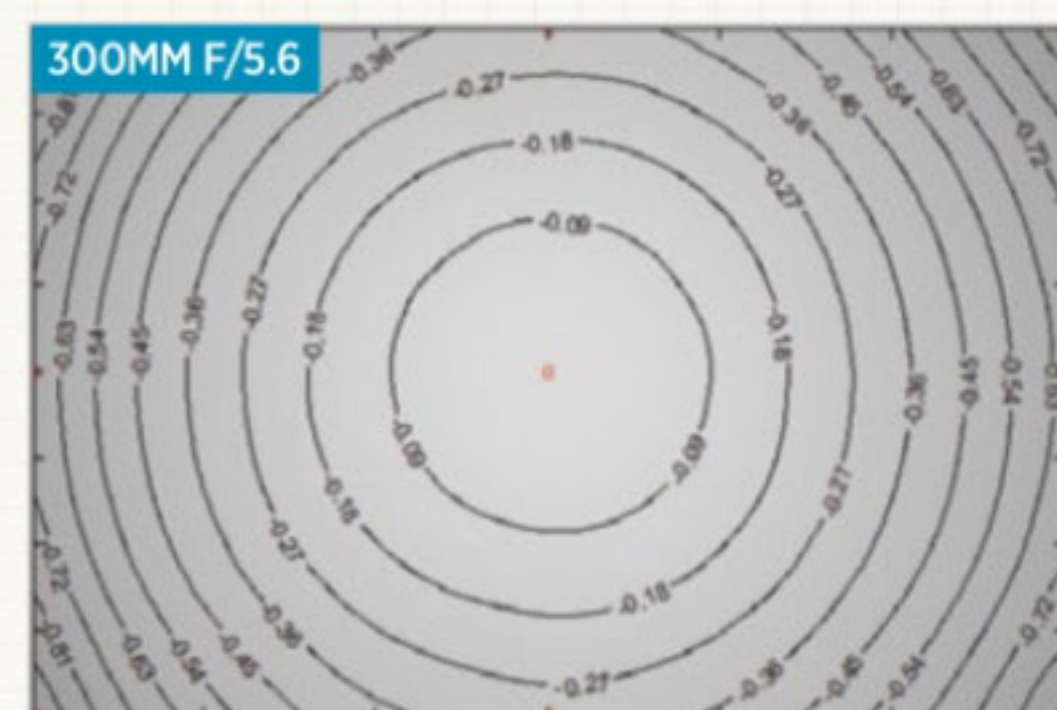
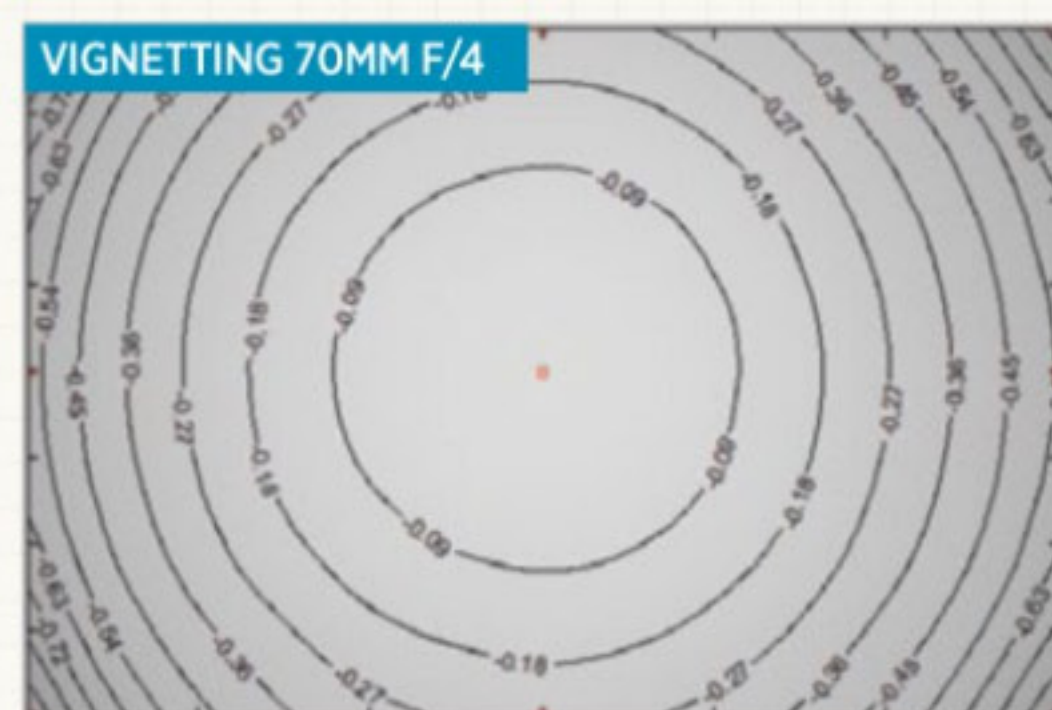


### 300mm

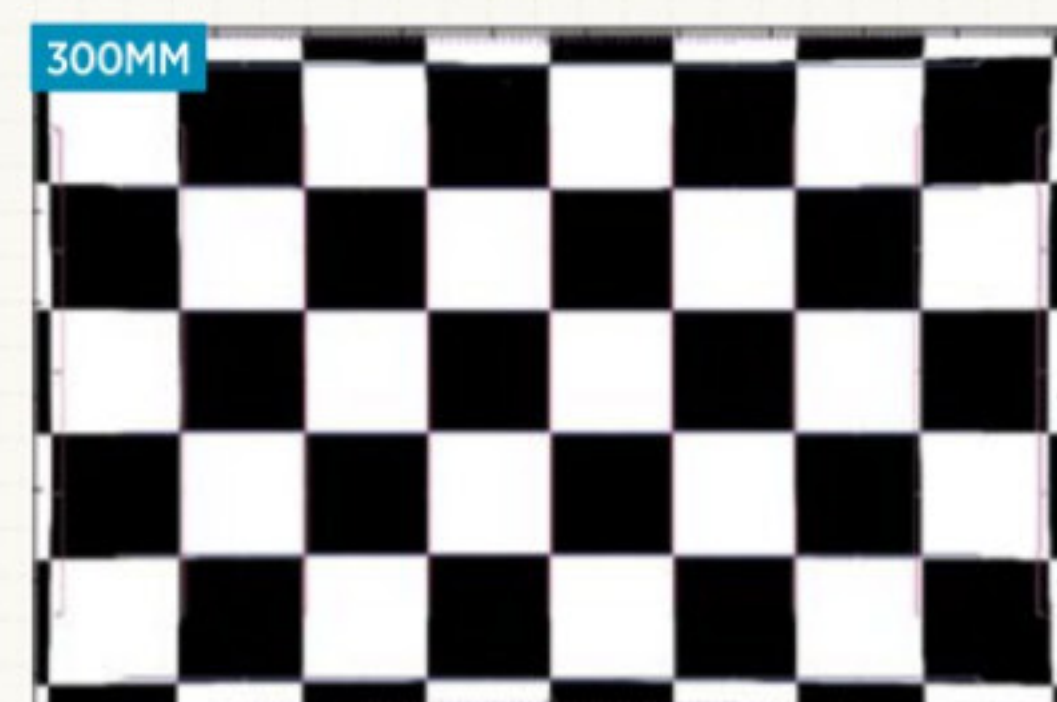
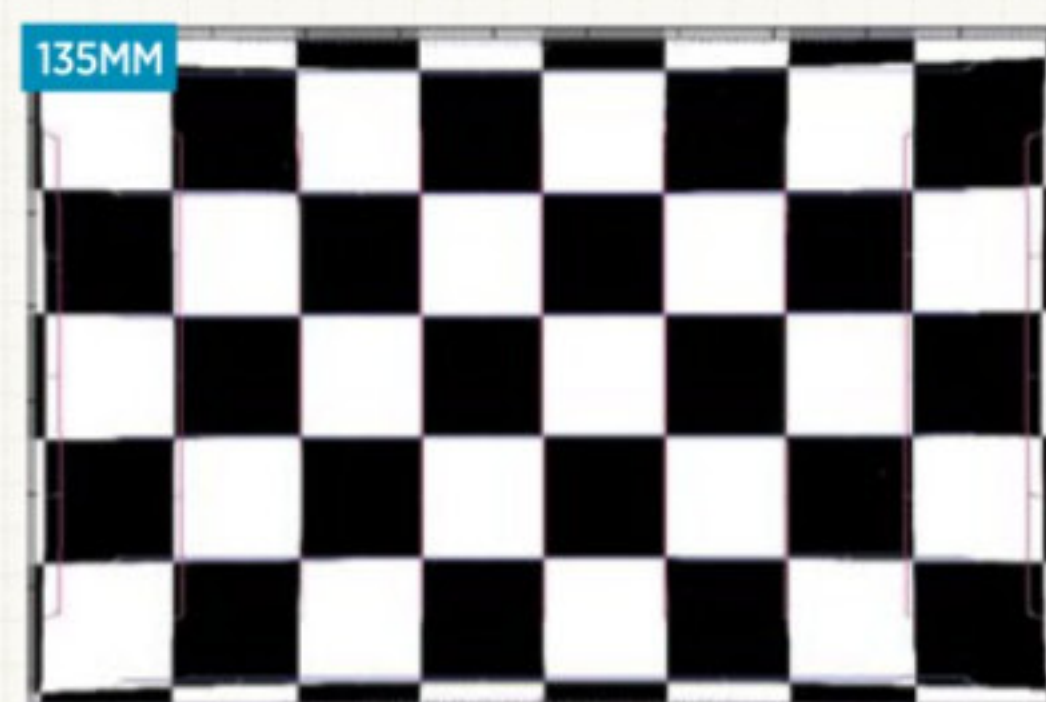
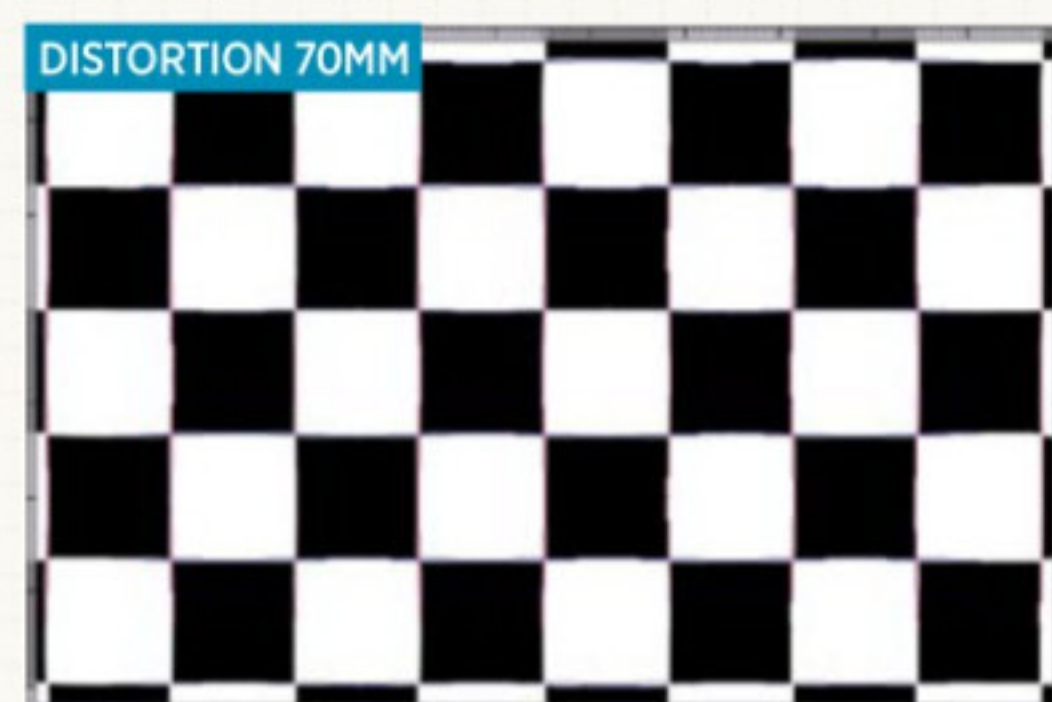


ANALYSIS USING  
IMATEST SOFTWARE  
(WWW.IMATEST.COM)

**ABOVE** The Sigma 70-300mm f/4-5.6 DG APO Macro, with apochromatic elements, is sharper than the non-APO version throughout, though the difference is very slight – around 3-4% on the MTF graphs, which is barely noticeable in practise so comments on the previous page apply here too. Chromatic aberration is also reduced with APO glass, and measured an average of 6.2 microns (Good) vs 8.0 microns (Fair) for the non-APO version.



**ABOVE** Unsurprisingly, vignetting performance is identical to the non-APO version with mild -1.0EV in the corners registered on full-frame at 70mm. There's a more noticeable bump to -1.5EV at 135mm (Very Good) then a drop back to -1.0EV (Excellent) at 300mm. Stopping down reduces these figures substantially and by f/8 vignetting is insignificant throughout, rating Excellent overall.



**ABOVE** As with the vignetting performance, distortion figures are a carbon copy of those from the non-APO Sigma 70-300mm. At 70mm on full-frame, there's mild barrel of +0.4% (Excellent) though this quickly changes to pincushion, becoming quite severe -3.1% (Poor) by 135mm, and only reducing slightly to -2.2% pincushion (also Poor) at 300mm, to score Fair overall. Distortion does not change with aperture.

performance, with sharpness enhanced and lower levels of CA at the long end where it's usually most noticeable. And so we did, compared to the non-APO version, but you really have to look hard. While the APO lens is sharper and CA is lower at all focal lengths and all apertures, the MTF graphs show an improvement in sharpness of no more than 3-4% and this minimal, not easy to spot in everyday picture taking.

That's not to say sharpness is disappointing, and considering its modest cost it's actually pretty good, almost always well into the Excellent zone and only dropping significantly at 300mm. It's ahead of the cheaper Tamron 70-300mm, and up there with the Tamron 70-300mm VC zoom that sets a high standard, comparable to much more expensive marque lenses. Distortion control is Fair overall, and vignetting generally Excellent.

## THE VERDICT

This is not an easy lens to evaluate. It kind of falls between two stools and a buying decision really depends on your priorities. Optical performance is quite impressive, particularly for a lens in this £150-ish price bracket, but if cost is the main factor, the cheaper non-APO version offers almost identical sharpness for less money.

On the other hand, the Sigma 70-300mm f/4-5.6 DG APO Macro is still a budget lens. It's lightly built with extensive use of plastics, has lower grade micro-motor AF rather than ultrasonic, and lacks image stabilisation that works so well with this focal length range and undoubtedly helps to net more keepers. If you follow that train of thought, then save a little longer and go for the more expensive Tamron 70-300mm VC that outclasses everything below £300.

## HOW IT RATES

### FEATURES 18/25

Just the essentials, no ultrasonic AF or image stabilisation. Handy 1:2 macro mode

### HANDLING 23/25

Good overall, compact and light. Build quality adequate, considering the price

### PERFORMANCE 18/25

Pretty sharp, but APO elements don't make a huge difference. Micro-motor AF and no image stabilisation loses points

### VALUE FOR MONEY 24/25

It's great value, but if price matters most, the non-APO is cheaper and almost as good

### OVERALL 83/100

No-frills spec, but the basics are there. Optics as good as more expensive models

**PROS** Price, decent optics, macro mode

**CONS** Basic spec, non-APO version costs less



## KEY FEATURES

ULTRA-LOW COST **MACRO FOCUSING DOWN TO 1:2** LIGHT AND COMPACT **FITTINGS FOR CANON, NIKON, PENTAX, SONY** STREET PRICE £100

# Tamron

## AF 70-300mm f/4-5.6 Di LD Macro



The Tamron 70-300mm f/4-5.6 Di LD Macro is a somewhat different proposition to the more expensive Tamron SP version reviewed over the page. Headline feature is probably the price, and it can be had for £100 or less at many retailers. It also has a 'macro' mode, allowing it to focus down to a reproduction ratio of 1:2.

To meet the price, Tamron has had to trim some of the less essential features, so there is no image stabilisation, and AF drive is by micro-motor rather than ultrasonic. There's also a bit less glass inside, and extensive use of engineering-

### TAMRON 70-300MM

**STREET PRICE** £100

**CONTACT** [www.intro2020.co.uk](http://www.intro2020.co.uk)

**FORMAT** Full-frame and APS-C

**FOCAL LENGTH** 70-300mm, APS-C equivalent 105-450mm 1.5x; 112-480mm 1.6x

**OPTICAL DESIGN** 13 elements in 9 groups

**PREMIUM ELEMENTS** 1x LD glass

**APERTURE RANGE** f/4-5.6 to f/32-45

**DIAPHRAGM** 9 rounded blades

**ANGLE OF VIEW** Full-frame 34° to 8° (diagonally), APS-C 23° to 5° 1.5x; 22° to 5° 1.6x

**MINIMUM FOCUS** 0.95m (from sensor)

**MAX REPRODUCTION RATIO** 1:2

**AUTOFOCUS** Micro-motor

**MANUAL FOCUS** AF/M switch

**FOCUSING SCALE** Yes

**DEPTH OF FIELD SCALE** No

**IMAGE STABILISATION** No

**ZOOM LOCK** No

**FILTER SIZE** 62mm (front rotates)

**TRIPOD COLLAR** Not available

**WEATHER RESISTANT** No

**DIMENSIONS (DxL)** 77x117mm

**WEIGHT** 435g

**ACCESSORIES** Hood supplied

**FITTINGS** Canon, Nikon, Pentax, Sony-A



**ABOVE** The 300mm end is great for pulling in distant detail but at the other extreme, engaging the Tamron's macro mode gives 1:2 magnification that is perfect for popular subjects like flower portraits.

grade plastics help to keep the weight down further to a low 435g.

The external finish is good, though there's a little wobble in the barrel when extended at longer focal lengths. This is hardly surprising since the overall length grows to almost twice the size at 300mm when focused close, and with the hood attached (supplied) it more than doubles.

Setting the closest focusing macro position isn't quite as simple as turning the ring a bit further. Macro is only available between 180-300mm, so first you must zoom out to the long end and push the switch to macro. This releases the focusing ring to turn the extra distance from 1.5m, where the reproduction ratio is 1:4 at 300mm, down to 0.95m and 1:2. This is half life-size, meaning that a subject 72mm wide will exactly fill the width of the sensor on full-frame, and on APS-C, a subject 45mm wide will do the same.

Engaging macro mode is a bit of a fiddle at first, but you soon get used to it

and 1:2 is about twice the magnification of most telezooms. It's perfect for popular subjects like flower portraits, though not a substitute for a proper macro lens. True macros are optimised for very close distance work down to 1:1, with high sharpness, minimal vignetting and distortion. While this Tamron can't match that, it's still a very handy feature and image quality is adequate.

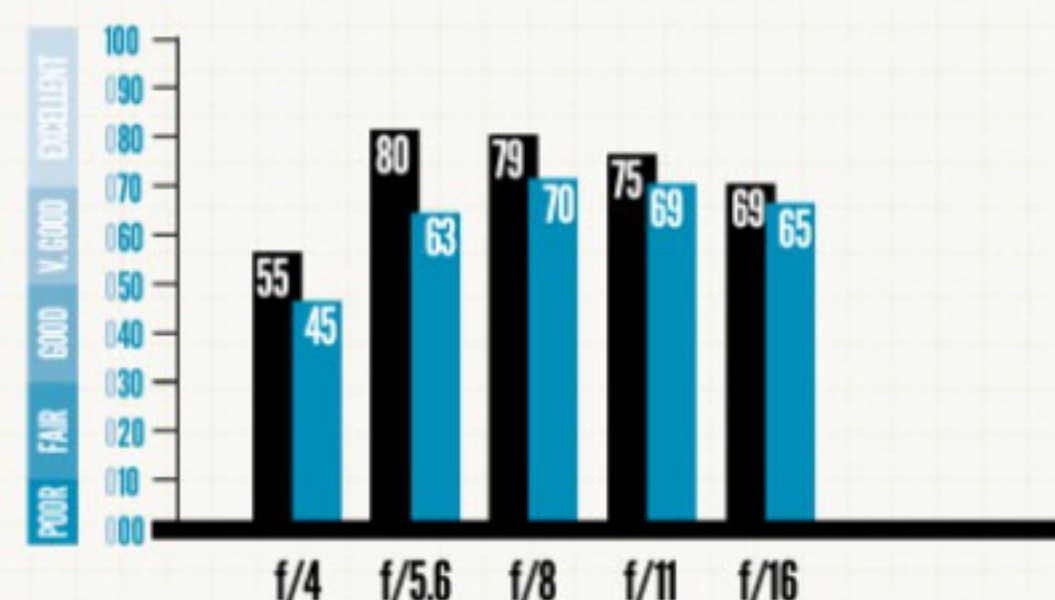
Also, because the macro feature is only available at the longer end, the working distance is very generous, like a couple of feet from the front of the lens to the subject, and this makes life a lot easier. You're less likely to scare off subjects like butterflies, or your body to cast a shadow. Keep the shutter speed up though, as the extra magnification of macro work increases camera-shake.

Autofocus is driven by micro-motor and is quite noisy, though decently fast in the near-to-far test, recording an average time of 0.6 secs on a Canon EOS 7D. This is a

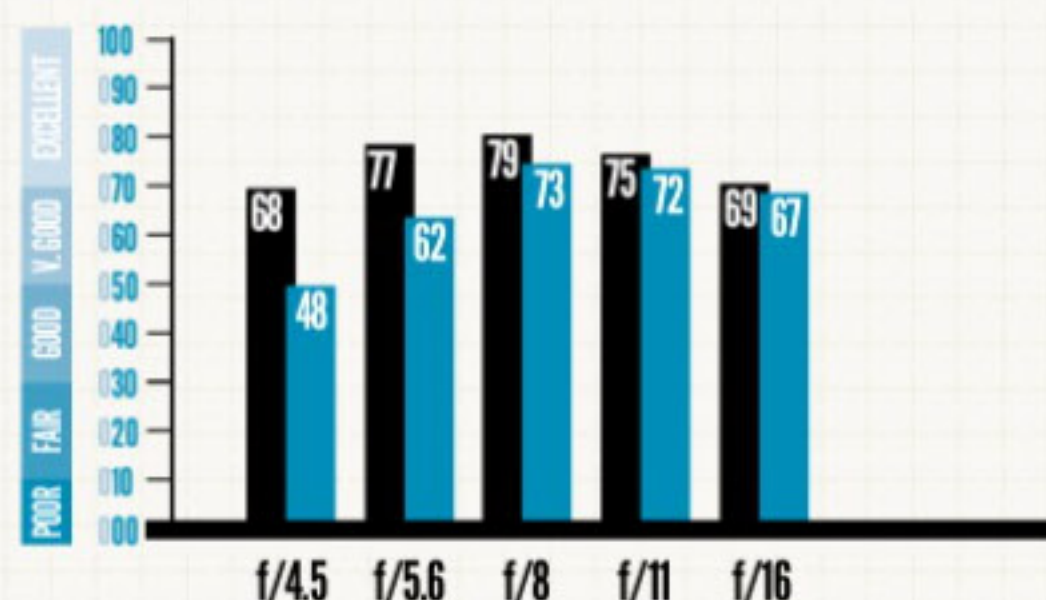


## TAMRON 70-300MM % MTF AT 24 LINES-PER-MM (FULL-FRAME)

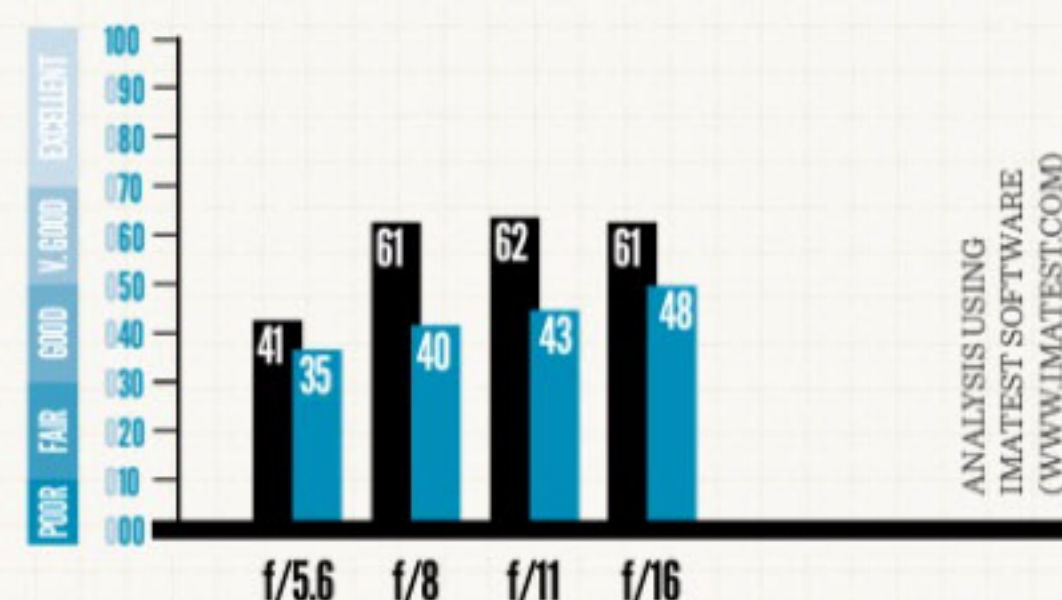
### Sharpness 70mm



### 135mm

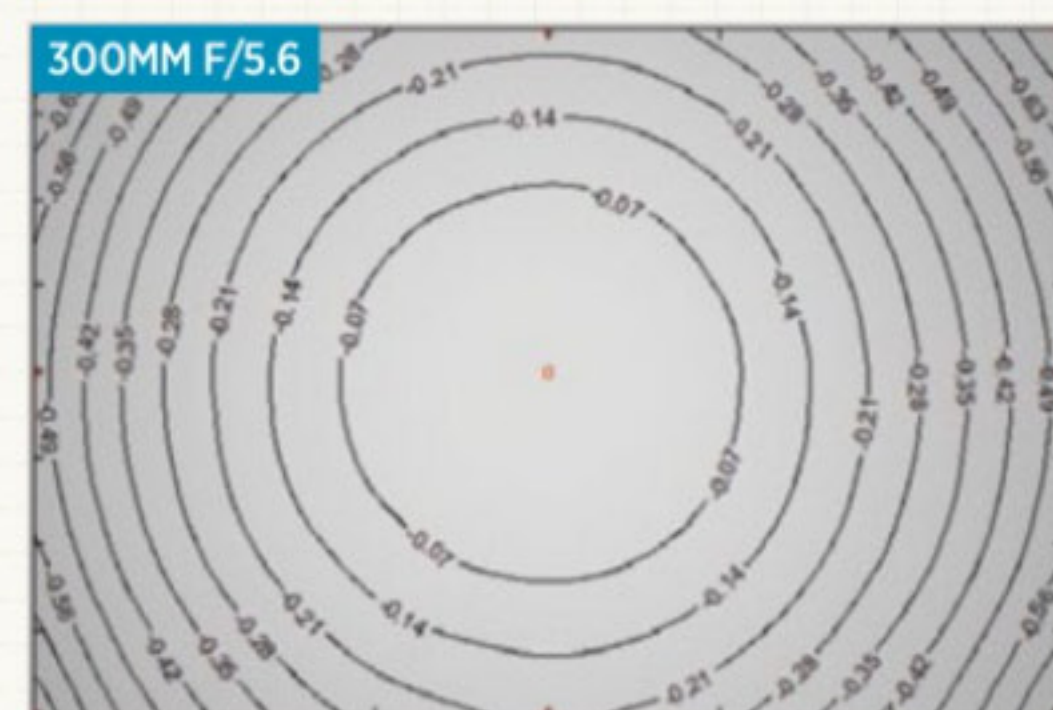
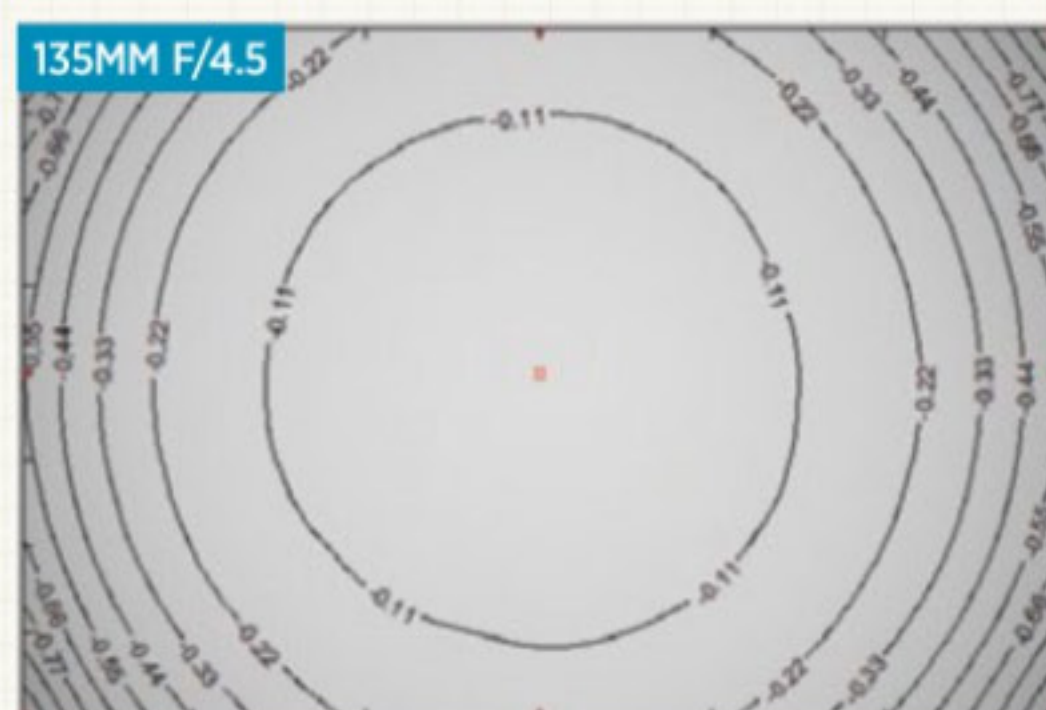
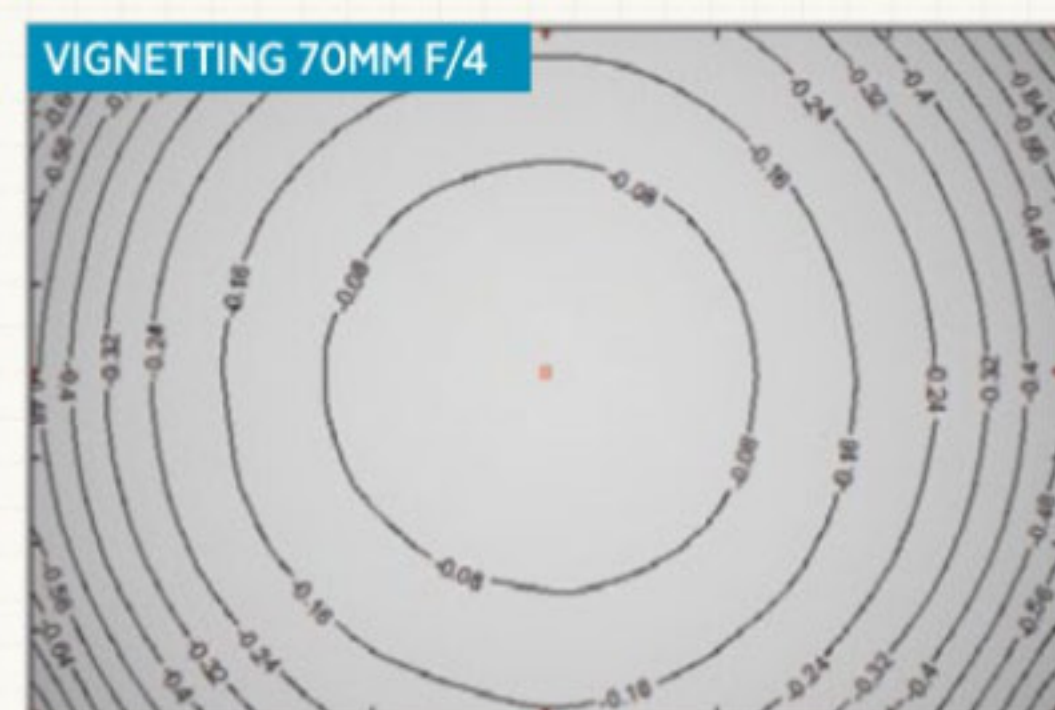


### 300mm

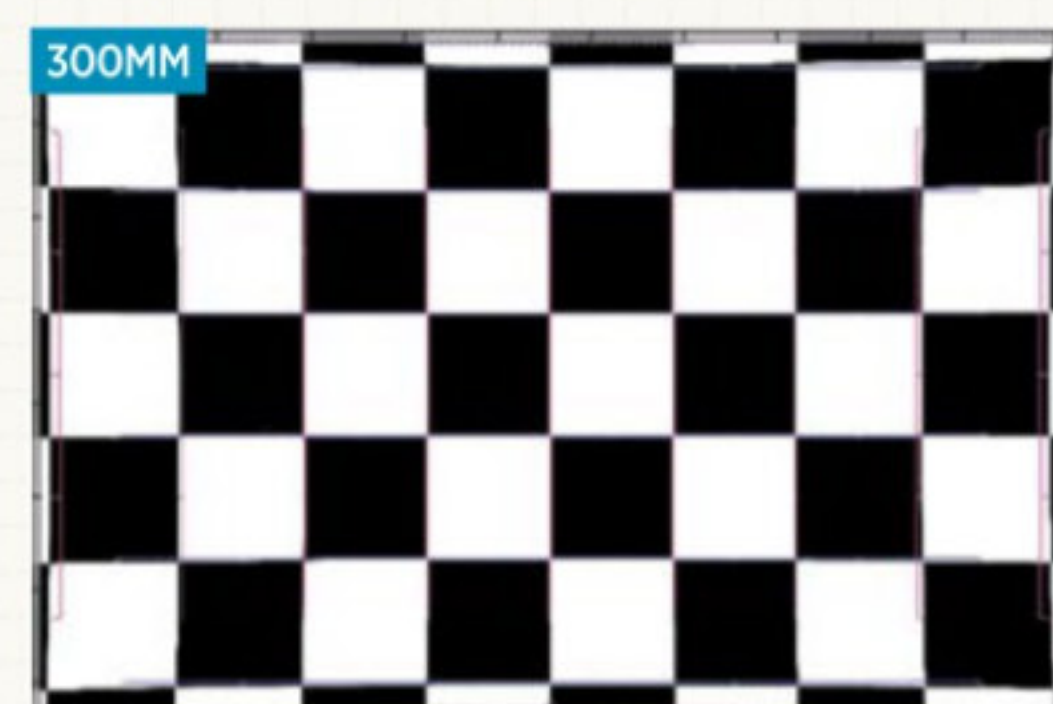
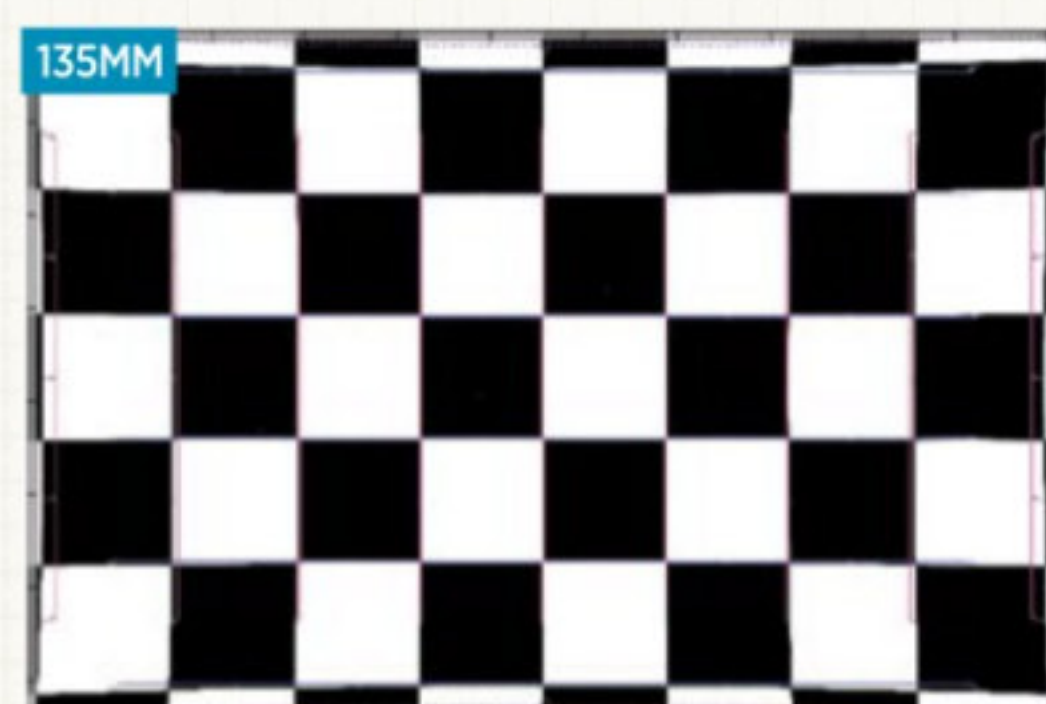
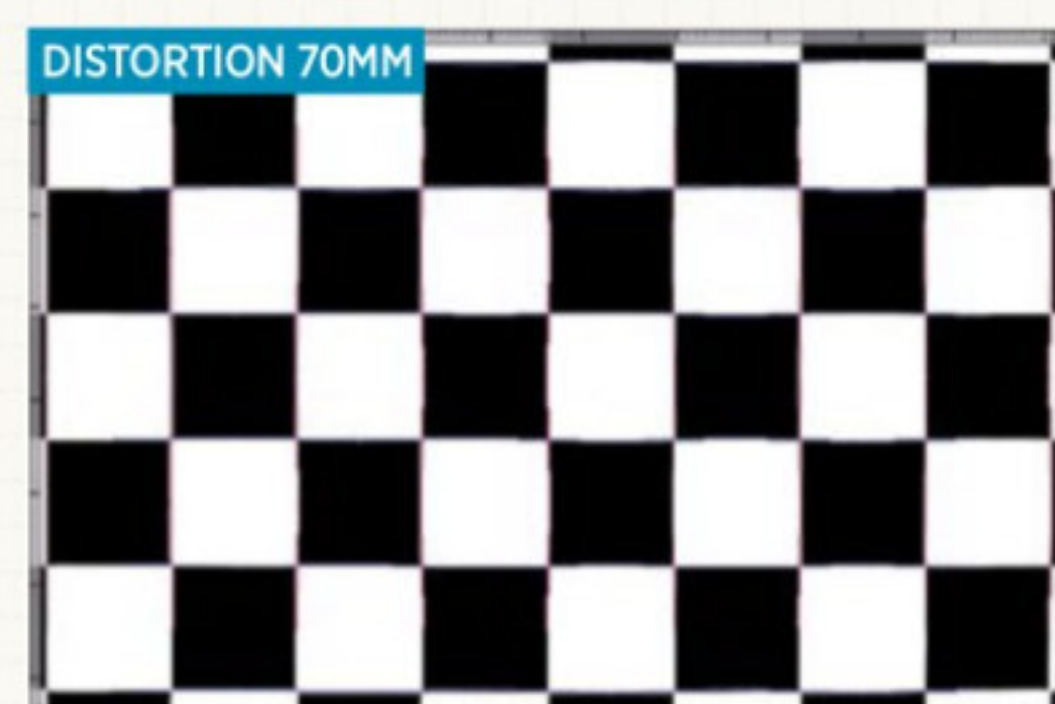


ANALYSIS USING  
IMATEST SOFTWARE  
(WWW.IMATEST.COM)

**ABOVE** Considering the cost, the Tamron 70-300mm f/4-5.6 Di LD Macro is a capable lens, but outclassed by the Sigma at similar money. High sharpness is to be had, but not at maximum aperture, and it never really makes it at 300mm. At 70mm and 135mm, from f/5.6 onwards sharpness is Excellent in the centre and the edges catch up from f/8. CA is moderate, rating very Good at 70mm, dropping to Fair at 300mm, rating Good overall.



**ABOVE** Telezooms are not often troubled by vignetting, even at the budget end. This Tamron is typical, with 0.9EV (Excellent) recorded at 70mm in the corners of full-frame, 1.1EV (Very Good) at 135mm, and 0.8EV (Excellent) at 300mm. Raising the f/number one stop knocks these numbers in half, reducing vignetting to insignificant and Excellent overall.



**ABOVE** Distortion rates as Fair overall, which doesn't sound great, but it's typical of telezooms in this range and is easily corrected in post processing. At 70mm it's actually Very Good with +0.6% barrel, then things take a turn for the worse as strong pincushion distortion of -2.7% (Poor) takes over from 135mm, only improving slightly to -2.1% (Poor) at 300mm.

respectable speed, conducted in good light at 135mm, but things change a bit when the light level drops and the focal length is increased. In those conditions, AF is slower and can be more hesitant.

On optical performance, in this group the £100 Tamron brings up the rear. It is capable of very sharp pictures, well into the Excellent zone and right across the frame, but only at mid-range apertures and at short-to-medium focal lengths. For best image quality, avoid shooting wide open and don't expect too much at 300mm.

Aberrations control is in line with other 70-300mms. There are moderate levels of chromatic aberration, becoming more noticeable towards 300mm, rating Good overall. Distortion is mild barrel at 70mm, switching to stronger pincushion through mid and longer focal lengths, rating Fair overall. Vignetting generally Excellent.

## THE VERDICT

Considering the very modest £100 price tag, you get a lot for your money – a lot of very useful zoom range and a handy close focusing ability down to 1:2 reproduction ratio. But the Tamron 70-300mm f/4-5.6 Di LD Macro has a couple of issues.

The first is the Sigma 70-300mm f/4-5.6 DG Macro that offers a similar specification, for the same money, and much better optical performance.

The second thing is, consider the benefits of spending a bit more on the Tamron 70-300mm f/4-5.6 Di USD VC. Relatively speaking it's a lot more money, but in absolute terms it's still great value and offers top grade optics, ultrasonic AF and excellent VC image stabilisation that is such a valuable addition to zooms of this focal length range.

## HOW IT RATES

### FEATURES 18/25

Only the basics, no ultrasonic AF or image stabilisation. 1:2 macro mode is useful bonus

### HANDLING 23/25

Everything works well enough, macro mode fiddly but you get used to it. Nice and light

### PERFORMANCE 16/25

It seems unfair to expect too much at this price, but the same cost Sigma is significantly better

### VALUE FOR MONEY 22/25

This little Tamron gets the job done, but the optics disappoint

### OVERALL 79/100

Small, light and cheap, with a handy macro mode, but its optics let the side down

**PROS** Low cost, macro mode

**CONS** Spartan spec, could be sharper



## KEY FEATURES

**USD ULTRASONIC AF VC IMAGE STABILISATION**  
**FULL-TIME MANUAL FOCUS OVERRIDE** CANON,  
NIKON, SONY FITTINGS **STREET PRICE £290**

# Tamron

## SP 70-300mm f/4-5.6 Di USD VC



This lens rings a bell. In so many ways, the Tamron 70-300mm USD VC is similar to the Nikon 70-300mm SWM VC reviewed in the last issue, and that can only be a good thing as the Nikon won Best in Test for its high all-round performance. This Tamron and the Nikon 70-300mm are styled much the same, with a straight-sided barrel and broad zoom ring at the front. They're the same length and very close in weight. The features list is similar too, including image stabilisation and Tamron's USD ultrasonic AF plus full-time manual override.

Even the optical design is the same as

### TAMRON 70-300MM

**STREET PRICE** £290

**CONTACT** [www.intro2020.co.uk](http://www.intro2020.co.uk)

**FORMAT** Full-frame and APS-C

**FOCAL LENGTH** 70-300mm,  
APS-C equivalent 105-450mm 1.5x; 112-  
480mm 1.6x

**OPTICAL DESIGN** 17 elements in 12 groups

**PREMIUM ELEMENTS** 1x LD, 1x XLD glass

**APERTURE RANGE** f/4-5.6 to f/32-45

**DIAPHRAGM** 9 rounded blades

**ANGLE OF VIEW** Full-frame 34° to 8°  
(diagonally), APS-C 23° to 5° 1.5x; 22° to  
5° 1.6x

**MINIMUM FOCUS** 1.5m (from sensor)

**MAX REPRODUCTION RATIO** 1:4

**AUTOFOCUS** USD ring- ultrasonic drive

**MANUAL FOCUS** Full-time override

**FOCUSING SCALE** Yes

**DEPTH OF FIELD SCALE** No

**IMAGE STABILISATION** 4-stops claimed,  
auto-mode

**ZOOM LOCK** No

**FILTER SIZE** 62mm (non-rotating)

**TRIPOD COLLAR** Not available

**WEATHER RESISTANT** No

**DIMENSIONS (DxL)** 82x143mm

**WEIGHT** 765g

**ACCESSORIES** Hood supplied

**FITTINGS** Canon, Nikon, Sony-A



**ABOVE** This Tamron's optical design features 17 elements, two are premium quality glass, in 12 groups and in our test showed itself to be a great lens and excellent value for money.

the Nikon, with 17 elements in 12 groups and two of premium quality glass. This is getting spookily similar, and Tamron and Nikon have actually shared lens designs in the past, though there are a couple of notable differences here such as the Tamron's f/4 at 70mm against the Nikon's f/4.5, and the other big difference is the Tamron being a very handy £150 cheaper.

Similar or not, what really matters of course is how well it works, and on the subject of handling and build quality the Tamron scores highly. It's well made and feels good, the extra weight giving an impression of robust construction, supported by minimal wobble of the barrel when extended at the 300mm end. As mentioned, it's not a small lens as 70-300mms go and the welcome inclusion of a petal-shaped lens hood makes it even longer, though it's well balanced. Zoom and focus rings are smooth and nicely weighted, and it does without a zoom-lock to prevent tromboning.

Tamron's USD autofocus system performs very well, if not quite the fastest in class. In the near-to-far speed test it averaged 0.68 secs, which is a tenth or so behind some, but this is hardly noticeable in practise and doesn't affect the lens' ability to servo-track fast moving subjects that don't require it to move that far or that quickly. It's commendably quiet and focus locks-on positively.

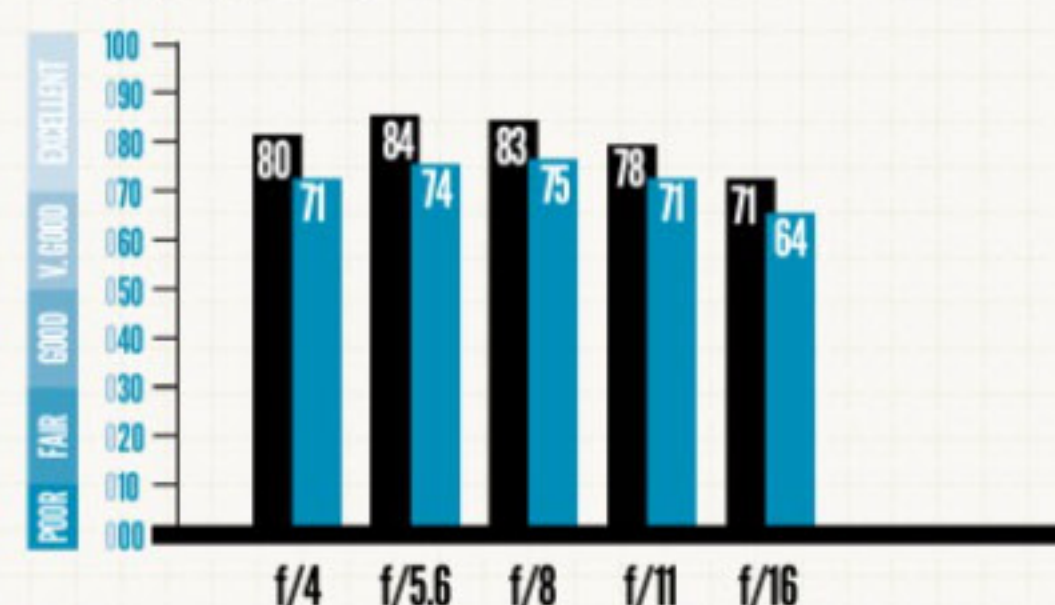
Tamron's VC image stabilisation usually impresses, and automatically senses panning movement so doesn't require a two-mode switch. The claim is four stops of shake reduction, as most manufacturers state these days, though this tends to be optimistic. In practise, we achieved 80% sharp images at three stops, and 50% at four stops, and that is very close to the best modern systems.

Optically, and the question of how it compares to the so-similar Nikon 70-300mm, overall the Tamron is a fine match. It's very strong from 70mm

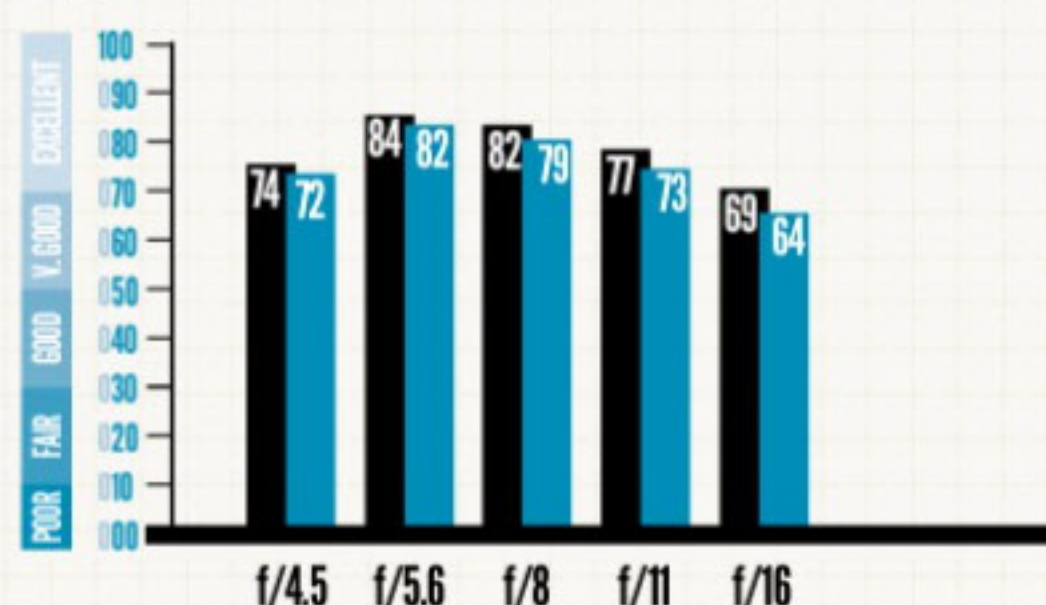


## TAMRON 70-300MM % MTF AT 24 LINES-PER-MM (FULL-FRAME)

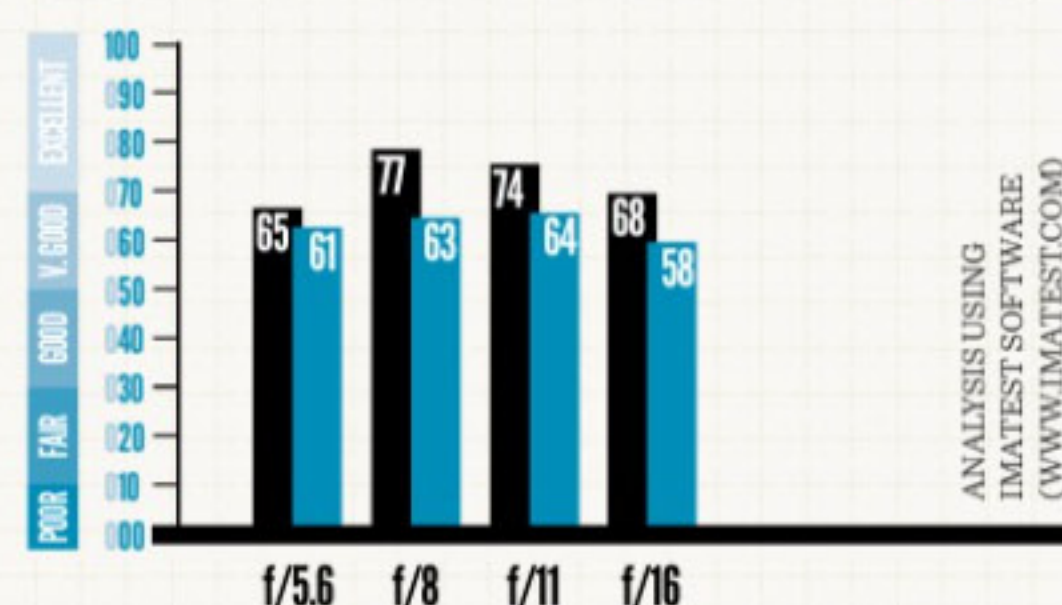
### Sharpness 70mm



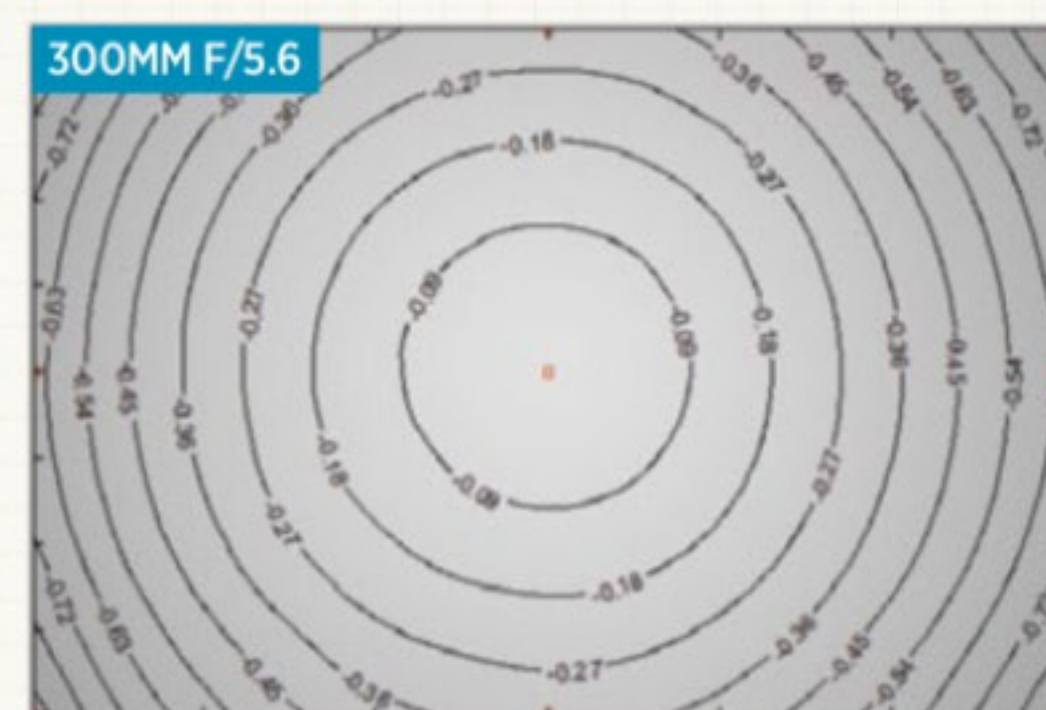
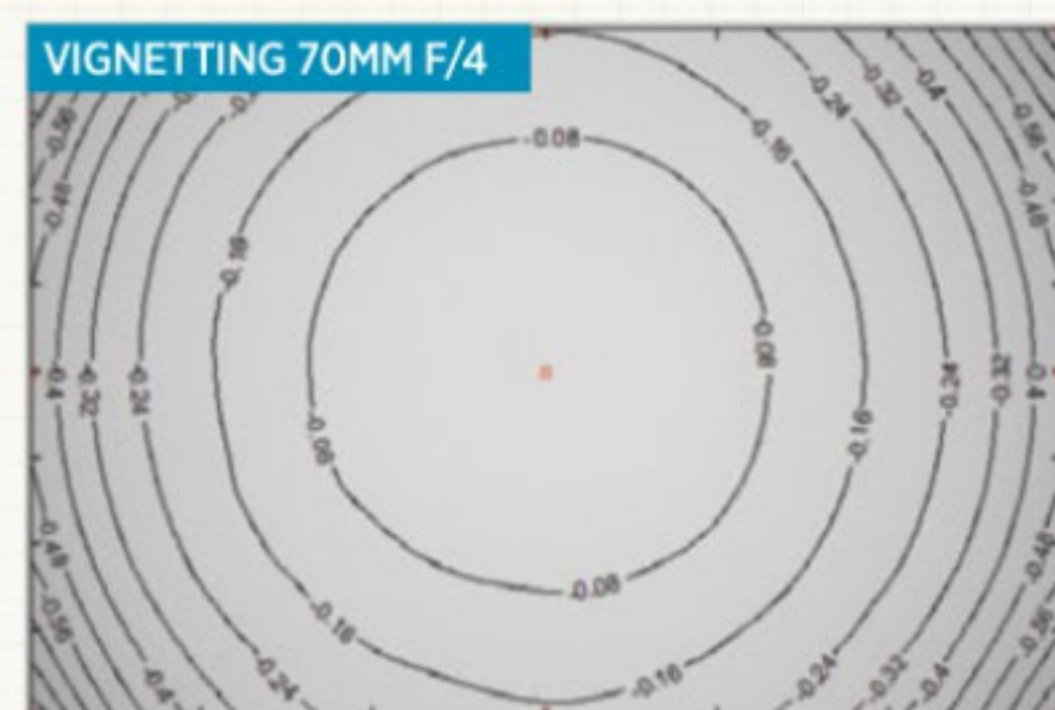
### 135mm



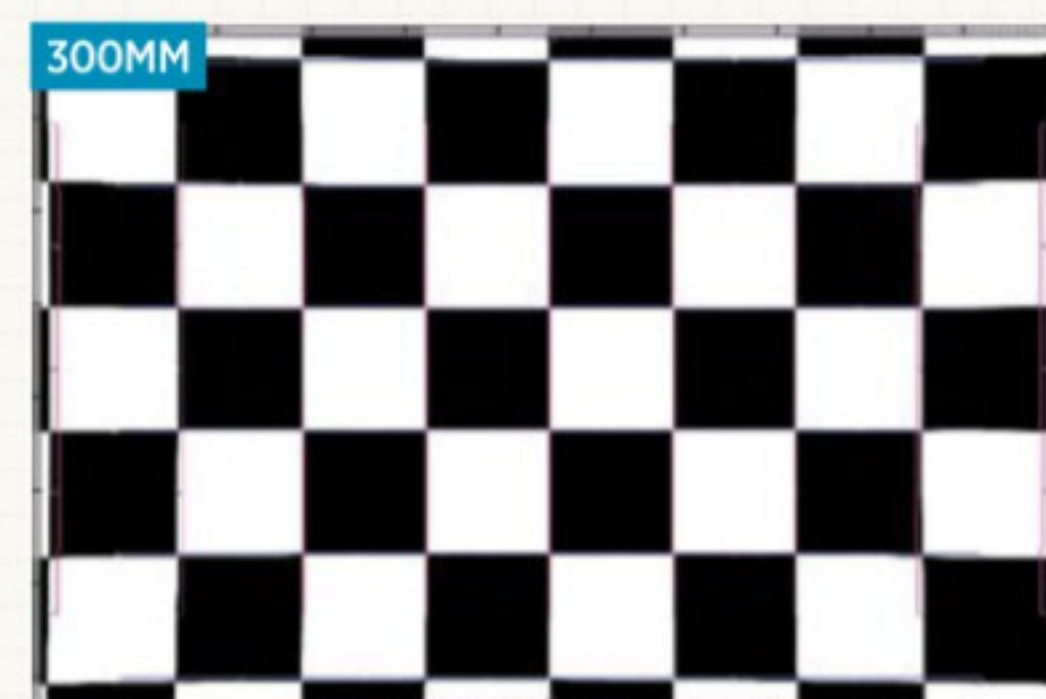
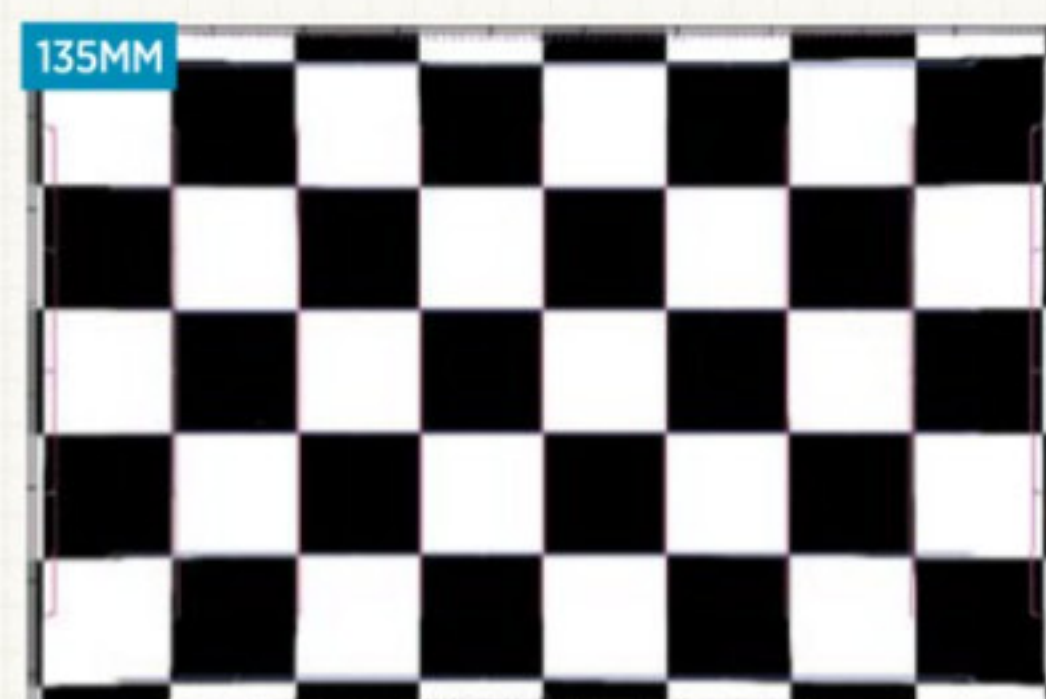
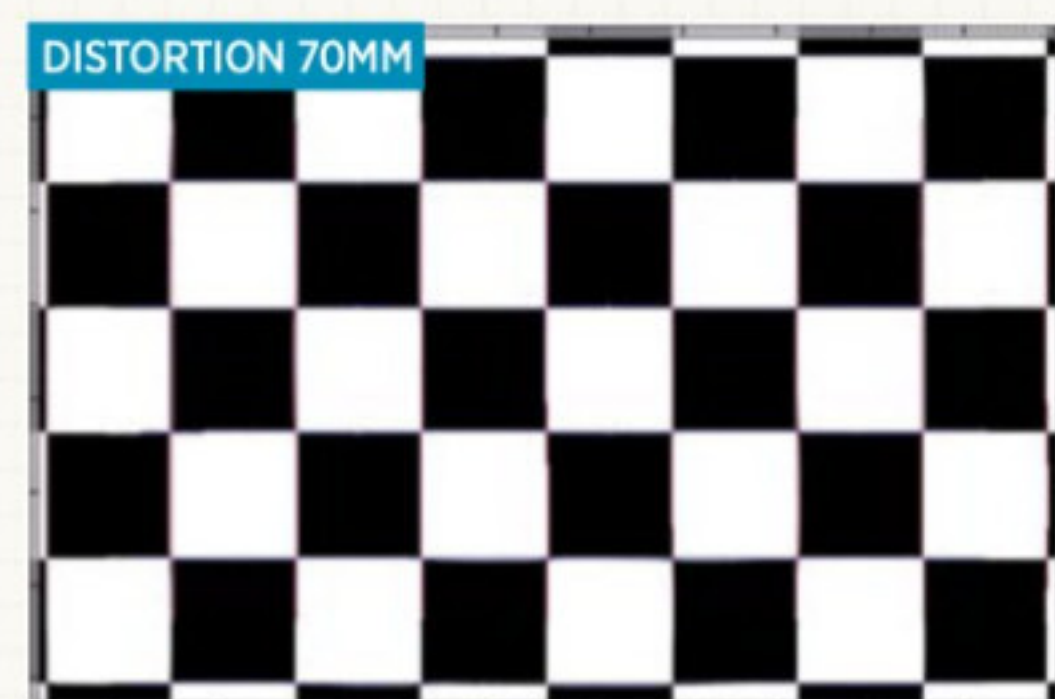
### 300mm



**ABOVE** At 70mm and 135mm, sharpness at both centre and edges only dips below the Excellent line at f/16, and is mostly well above it. The only notable weakness is at 300mm f/5.6, where there is a significant dip down to Very Good. It picks up quickly in the centre at f/8, and overall performance is very much in line with the better 70-300mms available. Chromatic aberration control is typical, rating Good overall.



**ABOVE** Vignetting performance rates as Excellent overall, as usual with zooms of this class. At 70mm in the corners on full-frame, latest recorded a darkening of 0.9EV (Excellent) rising fractionally to 1.3EV (Very Good) at 135mm, and falling back to 0.9EV (Excellent) at 300mm. Raising the f/number one stop reduces all these figures to insignificant.



**ABOVE** On full-frame, there's modest +0.6% (Very Good) barrel distortion, and as we invariably found with these telezooms, this changes to quite strong pincushion at mid-range and longer focal lengths - to -2.1% (Poor) pincushion at 135mm, and -1.8% (Fair) at 300mm. Overall rating Good, fractionally better than some, though nothing to boast about.

through 135mm, with both centre and edge sharpness only dropping below the Excellent line at f/16, but at 300mm there's a definite dip at f/5.6, as there so often is with telezooms, and this is where the Nikon is unusually good. The Tamron's centre sharpness recovers immediately with a steep rise at f/8 well into the Excellent zone, though the edges don't pick up in the same way.

Aberrations control is typical of the class, that is to say, nothing that can't be easily corrected in post processing.

Chromatic aberration is always noticeable around the edges if you go looking for it, more so at the longer end, rating Good overall. There's the usual mild barrel distortion at 70mm, turning to more noticeable pincushion at middle and longer focal lengths. Vignetting is minimal throughout so impressive.

## THE VERDICT

This is a great lens from Tamron, and it scores well on all fronts. It's well made, smooth operating, with good ring-type ultrasonic AF and effective VC image stabilisation. The only thing missing of significance is weather-resistant build, but nothing has that at this price.

Optical performance is very high, up with the best at short and mid-range focal lengths, and sharpness is none too shabby at 300mm either - a common weak spot for telezooms of this specification, including Canons (apart from the much more costly 70-300mm L). Only the Nikon 70-300mm VR beats it at 300mm f/5.6, which could be important to some users. But that one thing aside, the Tamron 70-300mm VC can match or beat anything in its class, and at £290 it's a brilliant buy.

## HOW IT RATES

### FEATURES **23/25**

High spec for the price. Ultrasonic AF, full-time manual override, and image stabilisation

### HANDLING **24/25**

Well made and smooth operating, with broad and well placed zoom ring. Effective image stabilisation

### PERFORMANCE **21/25**

Quality optics stand comparison with marque zooms. AF and IS also top grade

### VALUE FOR MONEY **23/25**

Great value

## OVERALL **91/100**

Features, build quality, and performance to match much more expensive options

**PROS** Value, spec, image quality

**CONS** Nothing significant at this price



# FULL TEST Nikon Df

*Retro is the new modern, and Nikon has brought film camera looks to full-frame DSLRs. With stripped down controls, it's designed to deliver a true photography experience*

WORDS IAN FYFE PICTURES IAN FYFE & WILL CHEUNG



## KEY FEATURES

£2749 WITH 50MM F/1.8 LENS

16.2-MEGAPIXEL FX SENSOR

39-POINT AF SYSTEM

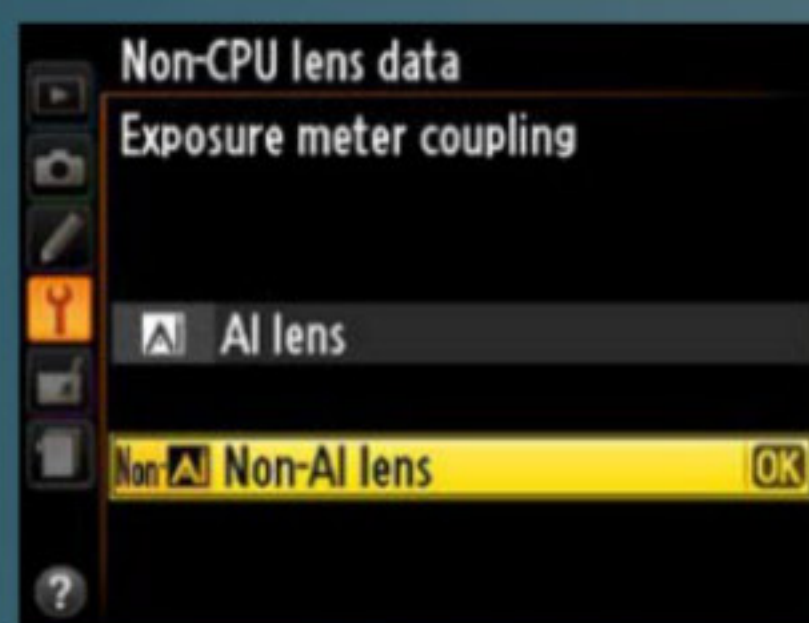
ISO 50-204,800 (EXTENDED)

5.5FPS

WWW.NIKON.CO.UK



**RETRO DIALS** The Df is designed to revive the tactile control of film cameras, so the main settings are controlled with metal dials on the top-plate. There are dials for exposure compensation, ISO sensitivity, shooting mode and shutter speed, along with a switch for the drive mode and command dials. Not only does this make the settings easy to access, but it also means you can see exactly what settings you're using by looking at the dials.



**PICK A LENS, ANY LENS** The Df is not just compatible with the latest Nikkor lenses, but also with vintage glass. The lens mount has a collapsible exposure-meter-coupling lever so it can accept almost all Nikkor lenses, including non-AI lenses. Even with these lenses, you can use full aperture metering – you just need to register the lens with the camera via the menus, set the aperture value on the camera to match that on the lens, and the camera meters accordingly.



**STRIPPED-DOWN MODES** These days, most cameras feature all kinds of automatic and preset modes that most advanced photographers rarely, if ever, use. The Df does away with most of this and strips it back down to just manual, aperture-priority, shutter-priority and program. The only extra to straightforward photography on the Df is Picture Control, which offers standard, neutral, vivid, monochrome, portrait and landscape filters applied to JPEGs.





Over the years, electronics have completely changed the experience of photography. Besides digital image capture, they've moved the photographer's control of their camera away from mechanical dials, rings, switches and levers, to become increasingly indirect and channelled through circuit boards. With the Df, Nikon has tried to recapture the feel of the pre-electronic era with traditional controls. But the 'f' stands for fusion, summing up how this is mixed with flagship digital technology to produce a tool that's unique amongst modern cameras.

The top-plate of the Df features retro-styled metal dials that even at first look stir memories of the olden days. They feel the part too – they're metal, knurled and give satisfying clicks as you turn them. These tactile controls are mixed with an array of altogether more modern digital buttons on the back, a mix that certainly lives up to the fusion label.

The bias is definitely still towards more modern control though, and you can even set things up so that it's practically the same as any other current Nikon DSLR. For example, the shutter speed dial can be used in S or M modes to adjust the shutter speed in 1EV steps, but if you miss the modern option of smaller step changes, you can set the dial to 1/3 step and use the front command dial to change the shutter speed as you would on any modern Nikon. Alternatively, an easy shutter speed shift option in the menus means the shutter speed set on the dial can be nudged by 1/3 or 2/3EV either way using the command dial. Similarly, you can use the aperture ring to set the aperture on older lenses, but if you're using a modern lens without a ring, you just use the sub-command dial as per the digital norm.

As someone who was introduced to photography in the digital age, I have to say that the idea of the retro controls didn't excite me that much. But after some time with the Df, I came to see the advantages and was pretty much won over. I really enjoyed being able to see exactly what settings I was using just by casting my eye over the dials on the top-plate, and clicking each of the dials into place to set the exposure before lifting the camera to my eye was a much more satisfying experience than I expected.

That's not to say that the arrangement isn't without its drawbacks though. In particular, I found it trickier to change settings with the viewfinder to my eye because I needed to move one or other hand to find the appropriate dial, and I also found the main command dial a little too far from my shutter finger to be entirely comfortable. The ISO dial can be something of a problem if you're shooting ➔

## ANATOMY OF...

### Nikon Df

#### FROM THE TOP

The top of the camera is covered in dials, all of which control the main shooting settings. On the left shoulder is an exposure compensation dial **1**, and underneath this is a larger ISO sensitivity dial **2**. Both of these have locks that must be held down to turn the dials. In the same place as you'd expect on a film DSLR, there's a shutter speed dial **3**, sitting above the drive mode switch **4**. This is next to the shutter release **5**, which has a thread for a traditional cable release and has the on/off switch around it. Furthest right is the mode dial **6**, which needs to be lifted to be turned. The top LCD display **7**, simpler than on most current DSLRs, displays just the shutter speed, aperture and shots remaining on the card.



#### FROM THE FRONT

The handgrip **1** is relatively slight compared to Nikon's other DSLRs, but it's sufficient. What looks like a cover for a socket is the main command dial **2**, still within reach of your shutter finger. Beside the lens are depth-of-field preview **3** and function **4** buttons, both of which can be customised. Positioned for your left thumb is the AF/MF switch, with the AF mode button at its centre **5**. In the absence of a pop-up flash that can be used to control off-camera flash wirelessly, there's a socket for a PC sync cable **6**. Above this is the control for bracketing **7** and the self-timer lamp **8**.



#### FROM THE BACK

This side of the camera looks decidedly more digital than retro. Those to the left of the screen include an 'i' button **1** that gives direct access to settings you'll use less frequently, such as noise reduction. Other buttons on the left include direct access to white-balance and image quality. One new control is the metering mode switch **2**, above the lockable multi-selector **3**. Beside the main command dial **4** is an AF-ON button, which can be used instead of the shutter release to activate AF. At the bottom is the Live View button **5**, but with no movie shooting this doesn't have the normal selector for movies or stills around it.



## AT-A-GLANCE SPECS

**PRICE** £2749 with 50mm f/1.8

**CONTACT** [www.nikon.co.uk](http://www.nikon.co.uk)

**SENSOR** 16.2 megapixels with EXPEED 3

**IMAGE DIMENSIONS** 4928x3280 pixels

**ISO RANGE** ISO 100-12,800 (50-204,800 expanded)

**AUTOFOCUS MODES** Single-point, 9-, 21- or 39-point dynamic-area AF, 3D tracking, auto-area AF

**EXPOSURE COMPENSATION** +/-3EV in 1/3

steps, AEB 2-5 frames at +/-3EV in +/-3EV in 1/3, 2/3, 1, 2 or 3EV steps

**SHUTTER** 30secs-1/4000sec

**METERING PATTERNS** Matrix, centre-weighted, spot

**SHOOTING SPEEDS** Single, continuous L, continuous H, quiet release, self-timer

**LCD SCREEN** 3.2in with 921k dots

**STORAGE MEDIA** 1xSD, SDHC, SDXC (UHS-I compatible)

**DIMENSIONS (WXHxD)** 143.5x110.0x66.5mm

**WEIGHT** 765g (including battery and card)





in very low light because it's difficult to see what you're doing – you have to either count clicks or turn on the back LCD.

With a top-plate LCD that only displays shutter speed and aperture values, you can't use this to adjust other settings such as white-balance and focusing mode. Instead, pressing these buttons activates the back LCD, and on occasion there was a slight pause as the software took a moment to catch up, in particular when selecting the AF mode. The mode dial is a little fiddly for me, and the lift-and-turn mechanism left me in the wrong mode on occasion – double-checking was required after a change. The on/off button is also more comfortable to turn with finger and thumb than shutter finger alone, making it less speedy, and in using this, it's easy to knock the drive mode switch.

Having said all of that, while these niggles meant the handling didn't feel quite as slick as it perhaps could, I must admit that they didn't much diminish the enjoyment of using the Df – all round, it was a lovely experience.

When it comes to the insides of the camera, there's nothing retro about the Df, although it could still be considered a bit of a fusion – not of new and old, but a combination of elements from all of Nikon's other full-frame DSLRs.

## “When it comes to the insides, there's nothing retro about the Df, although it's still a bit of a fusion – a combination of elements from other Nikons”

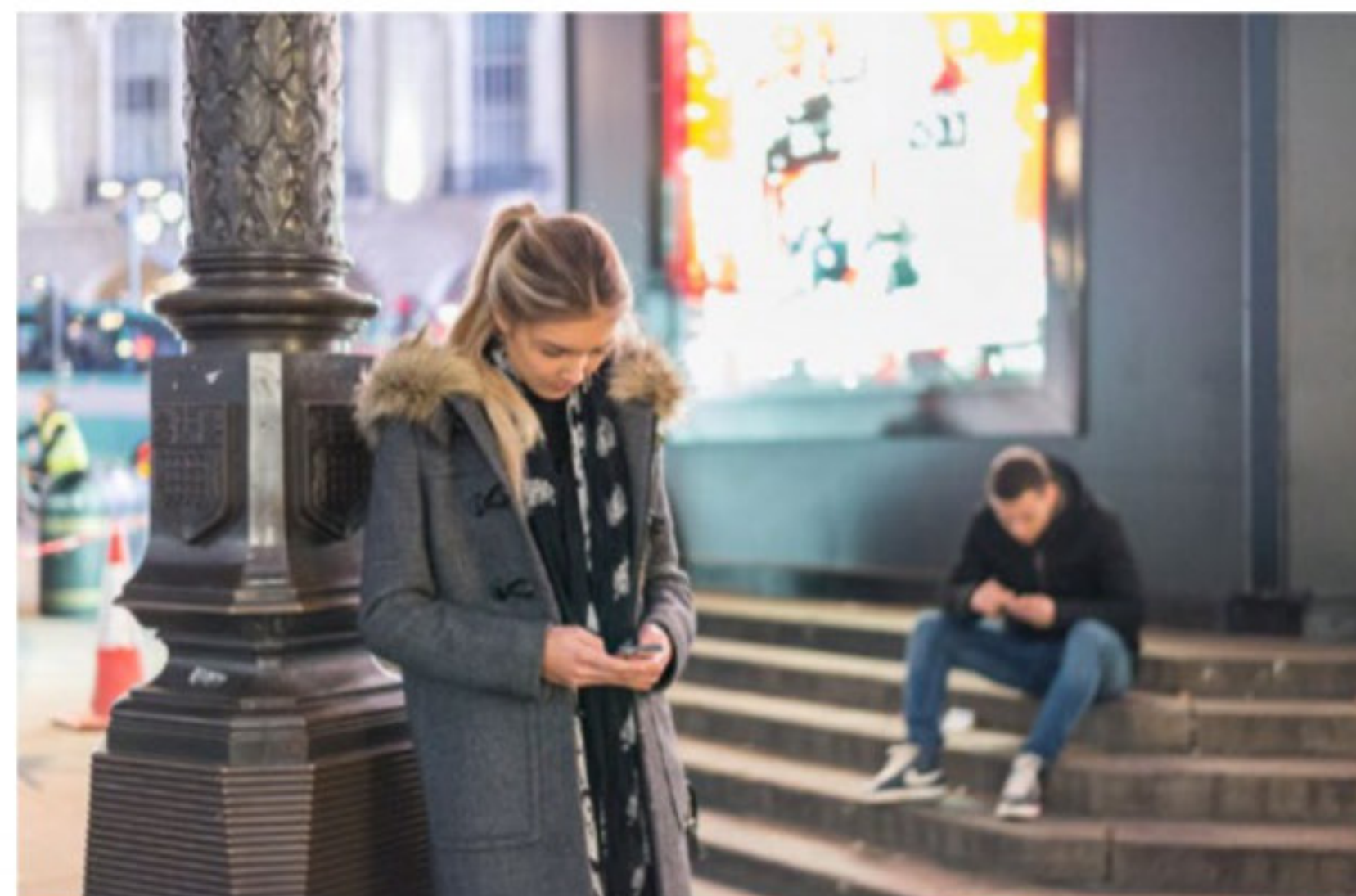
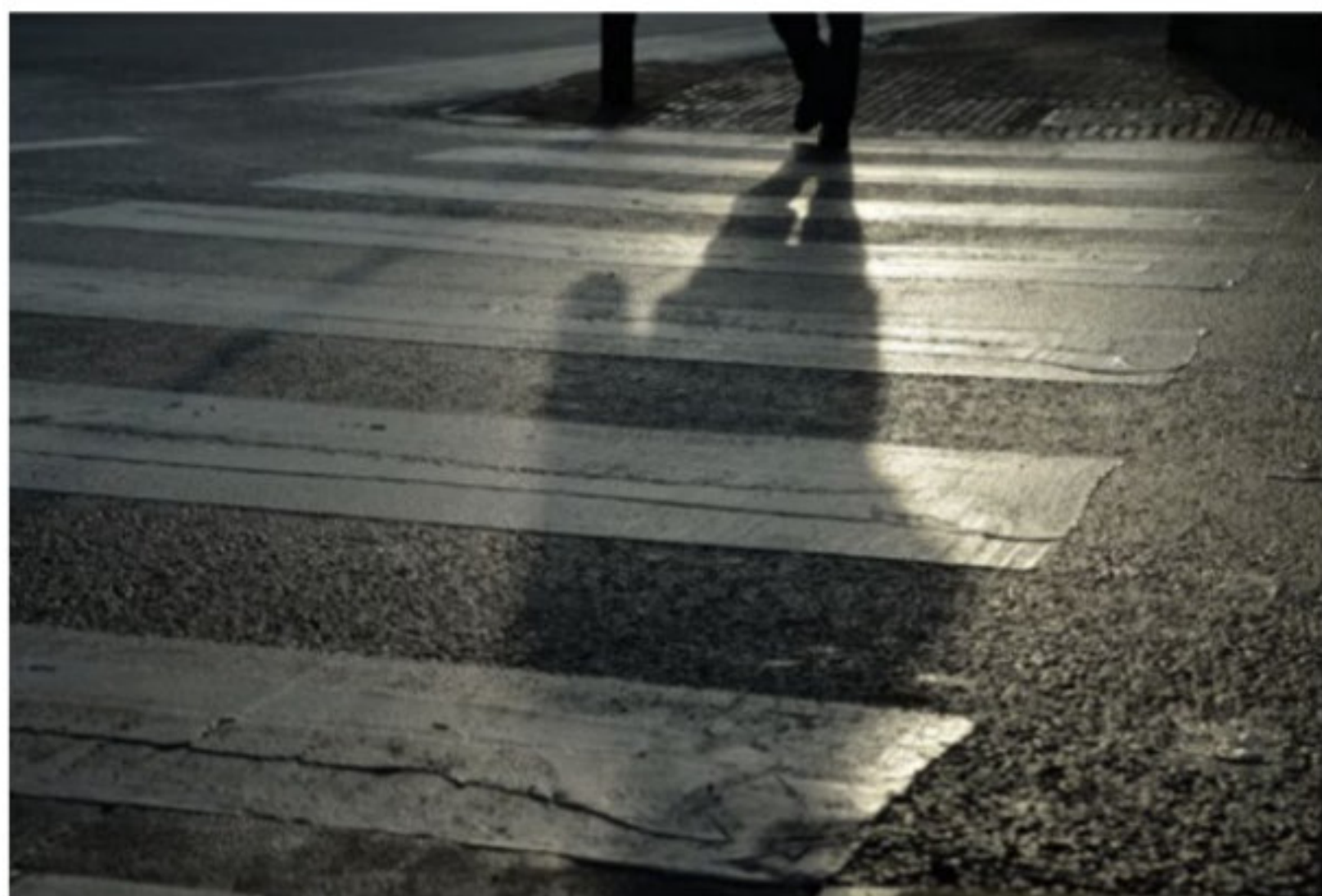
The sensor is the same as in the D4, and while Nikon points out that this makes it flagship quality, you can't get away from the fact that next to the D610 and D800, the 16 megapixels look relatively meagre. This may reduce the resolving power slightly, but it's worth bearing in mind the advantages. Obviously files are smaller and easier to work with, but there's another plus – the camera's compatible with and positively encourages use of old film lenses, and a pixel count like the D800's could reveal the shortcomings of such optics.

Flagship focusing doesn't accompany the sensor in the Df, and instead you get the same 39-point system as in the D610. This provides dense coverage in the centre of the frame, and it's as speedy and reliable as you'd expect. It only ever struggled in extremely low light, and this perhaps reveals a shortcoming of the technological mix – the Df's ISO capabilities, which match the D4's, mean it can take excellent-quality images in light levels that are so low it struggles to focus. The D4's focusing system has an extra EV of sensitivity that the Df would benefit from.

There's a variety of continuous AF modes that offer several solutions for keeping moving subjects in focus. This includes 3D tracking AF, but as with most tracking AF systems, I found this was easily confused and hit-and-miss as to whether it would follow your chosen subject. Much more effective is dynamic area AF, which uses surrounding AF points to keep your subject in focus should it wander temporarily from your selected point. The coverage of this can be varied to either 9, 21 or 39 AF points.

Auto white-balance only really had problems with mixed light sources, but the system includes a couple of neat features that really helped when it didn't get it quite right. You have the option of fine-tuning the AWB setting to add either more blue or more yellow with the WB button and sub-command dial, ideal if you just want to add or take away a little warmth. The highlight though is the Spot White Balance function for setting a custom balance. You just specify a point in the image in Live View that you want to be neutral to set a custom value, and this is stored as the preset value





when you switch back to viewfinder mode. It makes it quick and easy to get the white-balance absolutely spot on.

The Df feature set does have a couple of notable absences. It joins the D4 as the only other Nikon without a pop-up flash, so there's no wireless control of off-camera units, but it is compatible with Nikon's creative lighting system with a wireless adaptor and has a PC socket for a sync cable. There's also no video recording – sensible in a camera designed to enhance the experience of stills photographers, but at this price, its absence doesn't make you feel you've saved money from not having a feature you never use.

One other disappointing feature of the Df is the single SD card slot – the three other Nikon full-frame DSLRs all have dual card slots. The single slot is positioned alongside the battery compartment in the bottom of the camera, which may help keep the body size down, but it's an arrangement you'd more often associate with a compact, and hinders quick memory card changes, especially on a tripod.

Speaking of the battery, the pack in the Df is different from those in the other current Nikon full-frame models, and is the same as that used in the D5300 so is much smaller. This might be annoying if you use the Df in tandem with another Nikon full-

**BIG BEN** The ISO performance means you can happily use a high ISO to shoot in low light. This was shot at ISO 12,800. Taken with a 50mm, 1/400sec at f/1.8

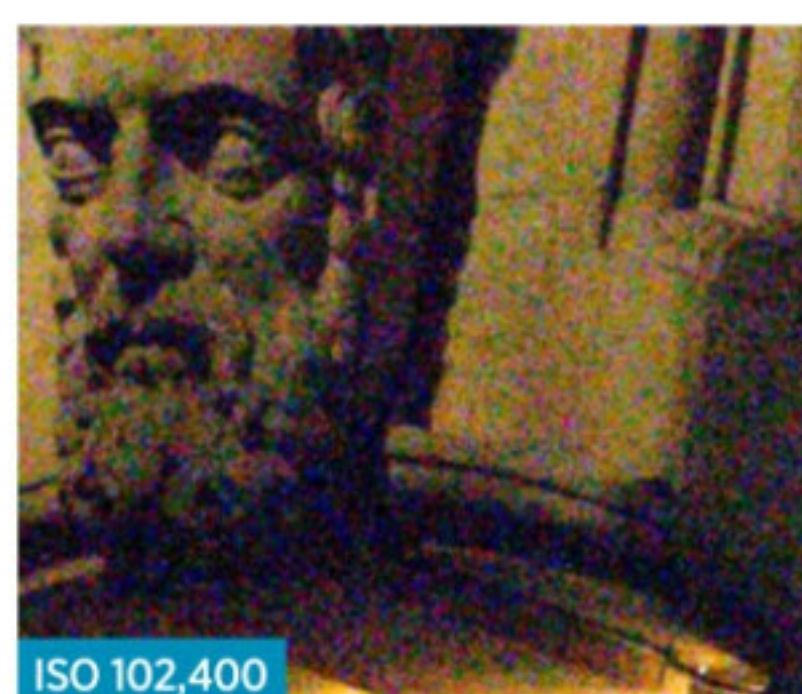
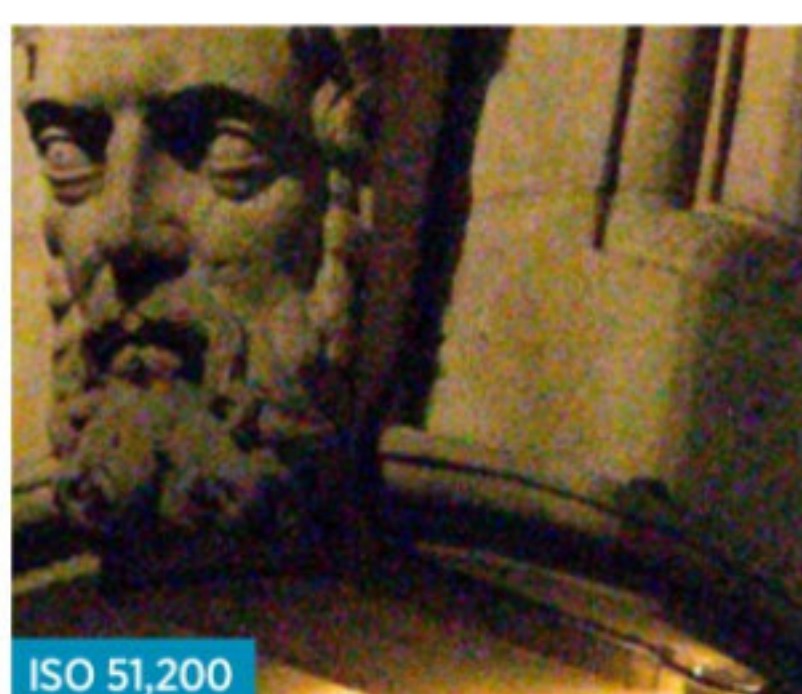
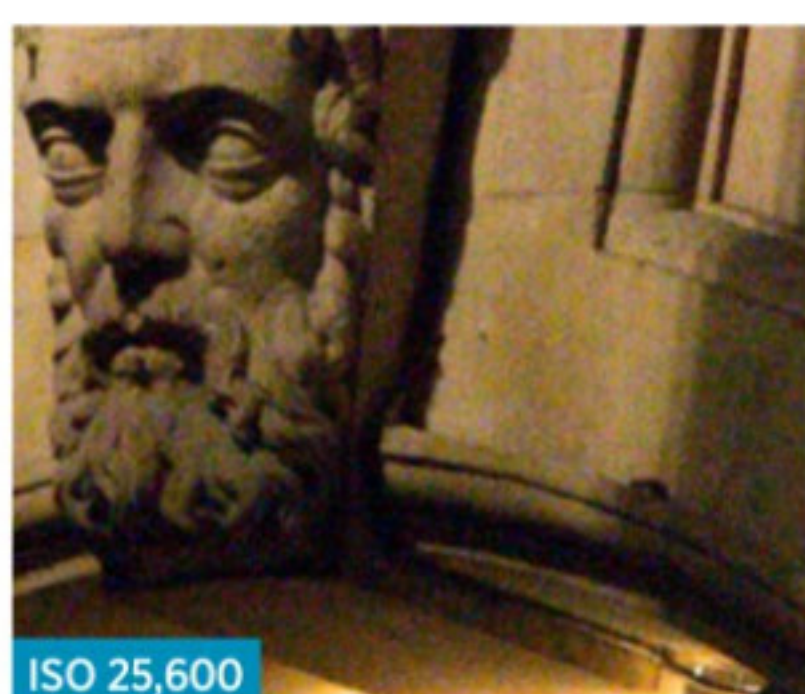
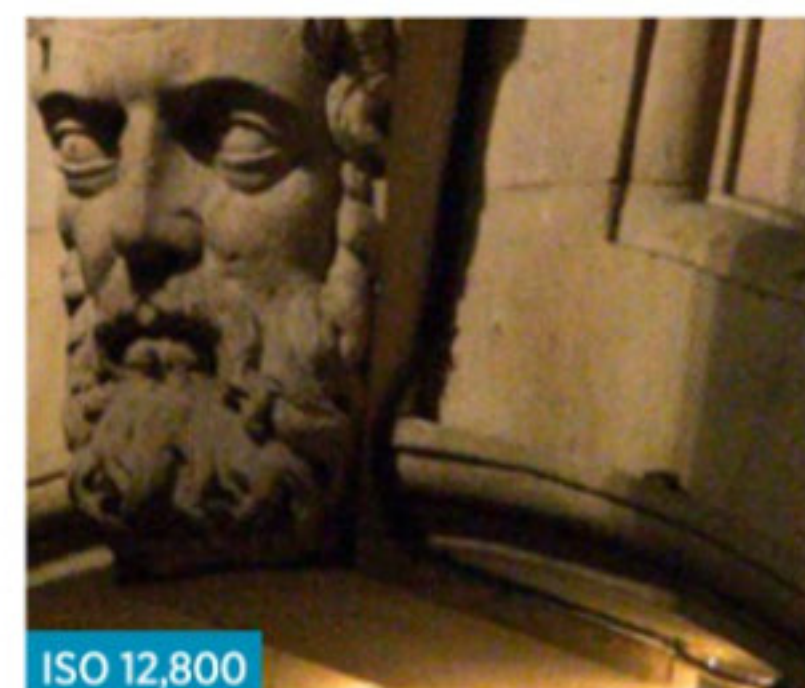
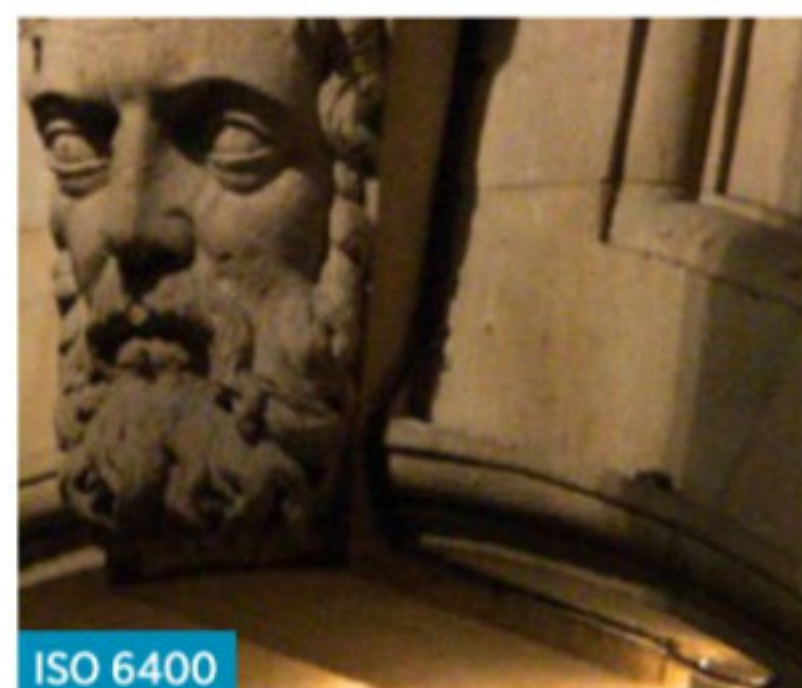
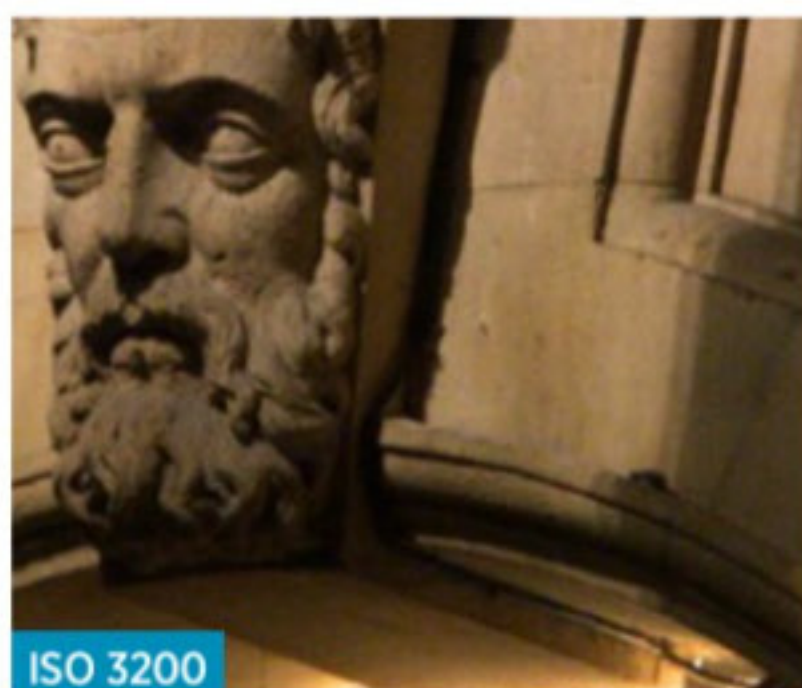
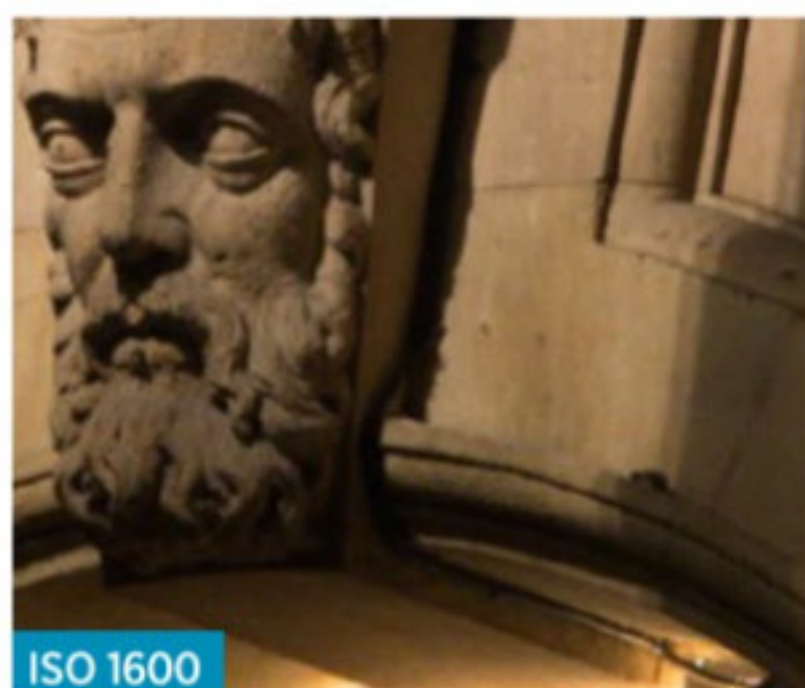
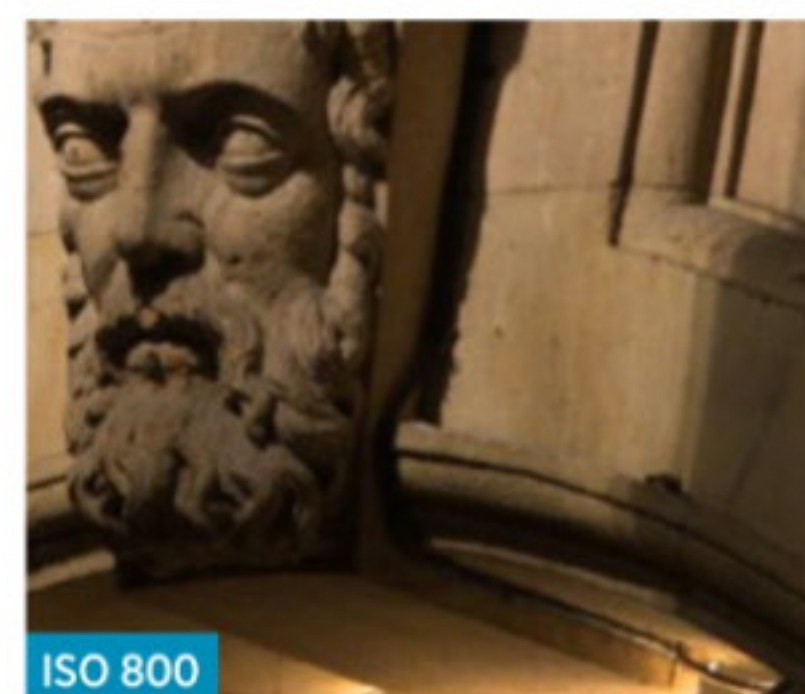
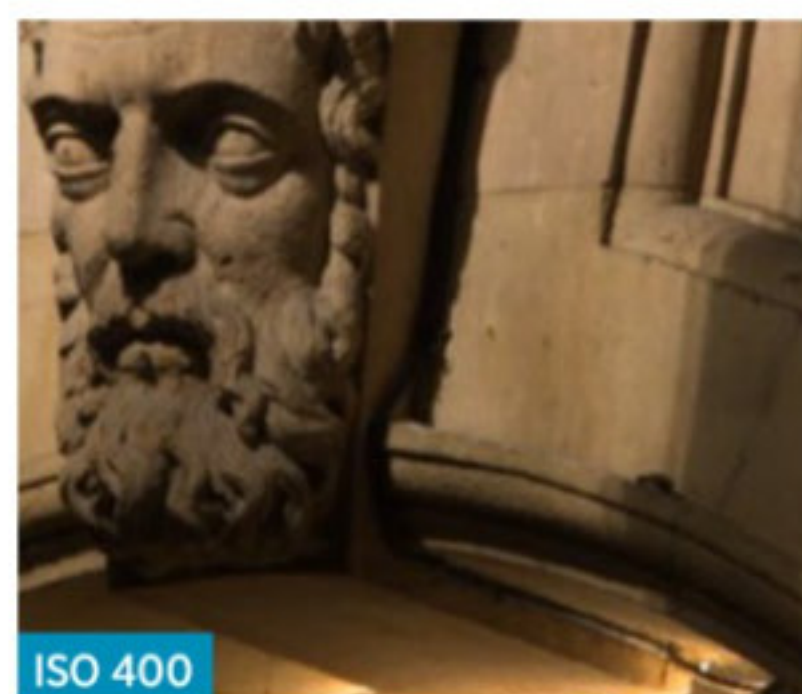
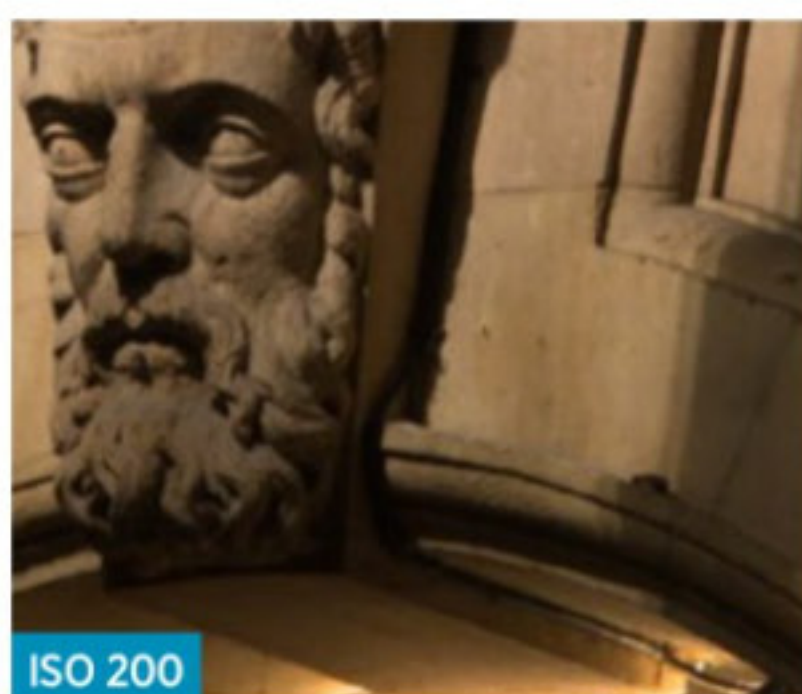
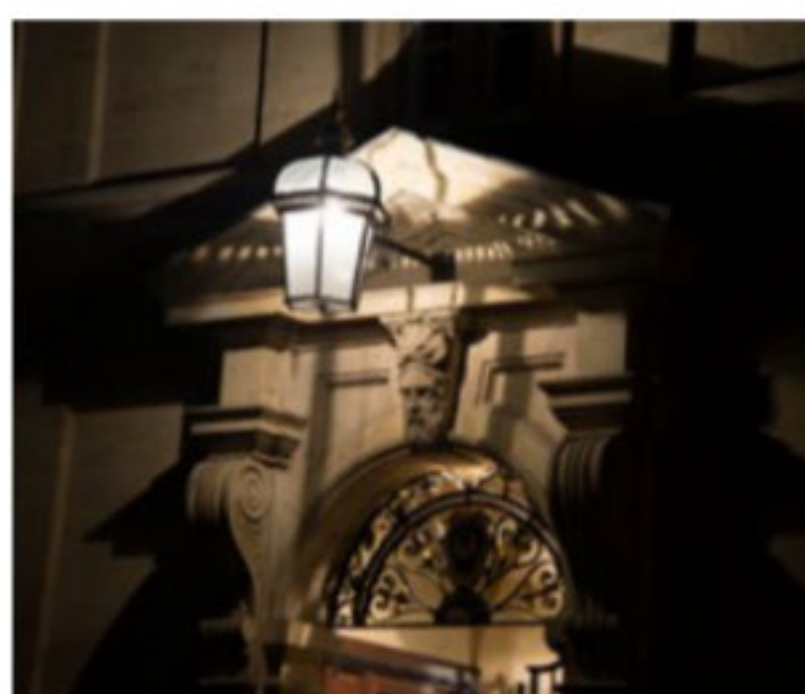
**ZEBRA CROSSING** Continuous shooting at 5fps helped to capture the best moment as pedestrians crossed. Taken with a 24-85mm, 1/3200sec at f/8

**PHONE COUPLE** The Df comes with a 50mm f/1.8 lens as standard, so shooting with this open wide in low light helps. Taken with a 50mm, 1/200sec at f/1.8

**FAG AND CHAT** Colours weren't affected by high ISO settings, and remained bold at 12,800 here. Taken with a 50mm, 1/1250sec at f/1.8

frame body because you can't interchange batteries, but it has a longer claimed life of about 1400 shots. For us, it delivered just short of 1000 shots – most of which were in temperatures below 10°C.





## ISO PERFORMANCE

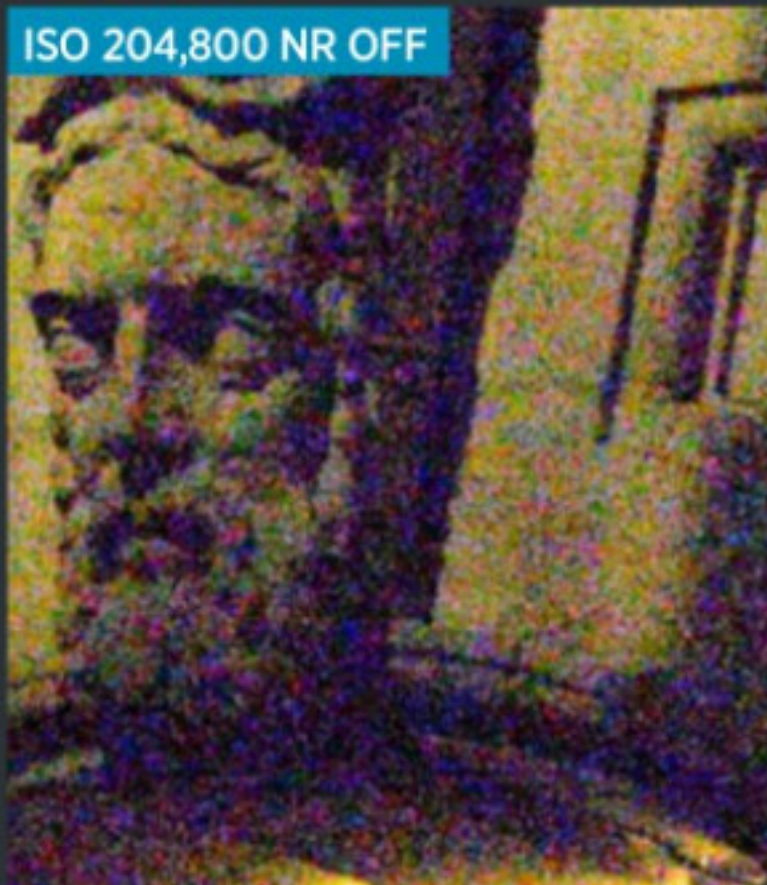
With the same sensor and processor as the D4, the Df also offers the same ISO sensitivity range, reaching the dizzy heights of 204,800 equivalent. It promises much, and it delivers.

Df files are supported in the very latest update to Lightroom, version 5.3, so we converted Raw files using this and without

any noise reduction applied. ISO 800 is completely indistinguishable from ISO 100, but even though some slight grain enters the equation at ISO 1600, it's barely noticeable and only increases gradually right through the top native setting of 12,800. The effect on detail is still small though, and there's no

effect on colour whatsoever. As you'd expect, noise is more significant in the expanded settings, but with noise reduction applied to Raw images in Lightroom, you can just about get away with squeezing up to the Hi 2 setting, equivalent to 51,200. If you go any further than this though, you really are pushing your luck.

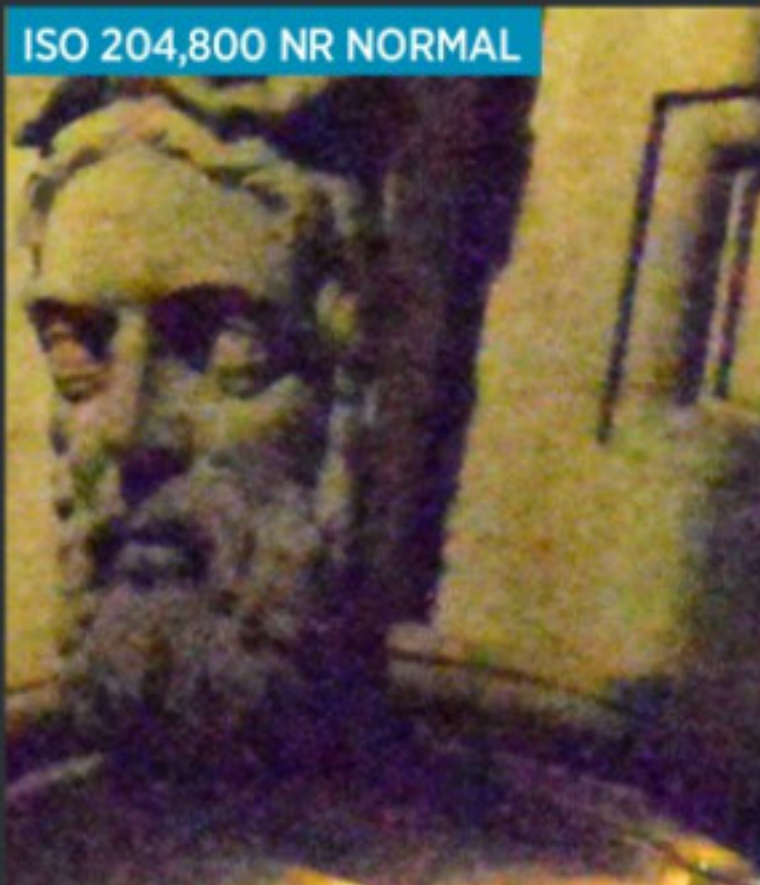
ISO 204,800 NR OFF



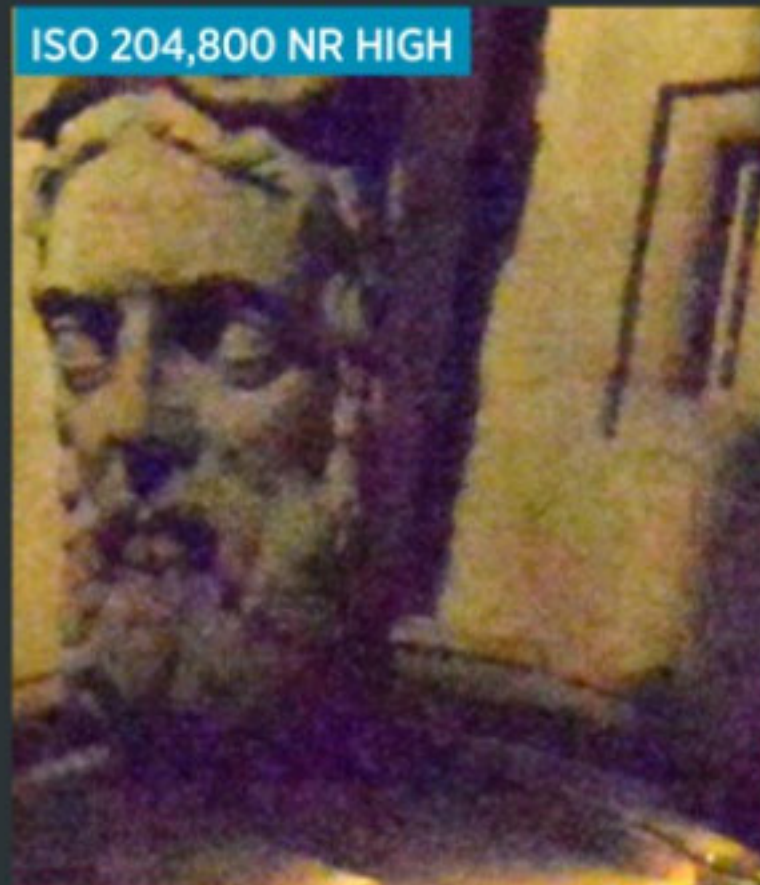
ISO 204,800 NR LOW



ISO 204,800 NR NORMAL



ISO 204,800 NR HIGH



## Noise reduction

If you're shooting JPEGs, you have the option of adding high ISO noise reduction at Low, Normal or High levels. It does what it says on the tin and reduces noise, but whether or not this improves image quality is debatable. At the expanded ISO settings, all-over graininess is replaced with blotchiness, and the detail looks very blurred. Below these expanded

sensitivity settings, ie. 12,800 and below, the ISO performance is so good that the noise reduction just isn't necessary, and it also affects the overall colour of images. Noise reduction can also be applied to TIFFs, although this produces almost identical results to JPEGs. There's no question that Raw files are by far and away the best option at any ISO sensitivity level.





## Df vs D610

The price of the Df positions it in the professional range of Nikon's full-frame line-up, but skimming through the specs of the Df and the D610 makes for similar reading, despite the fact that the D610 is targeted at consumers and currently

£1250 cheaper. In fact, a higher pixel count, dual SD slots, built-in flash with wireless command control and movie recording are all D610 features that the Df doesn't have.

We looked at the differences in core performance by comparing the resolution

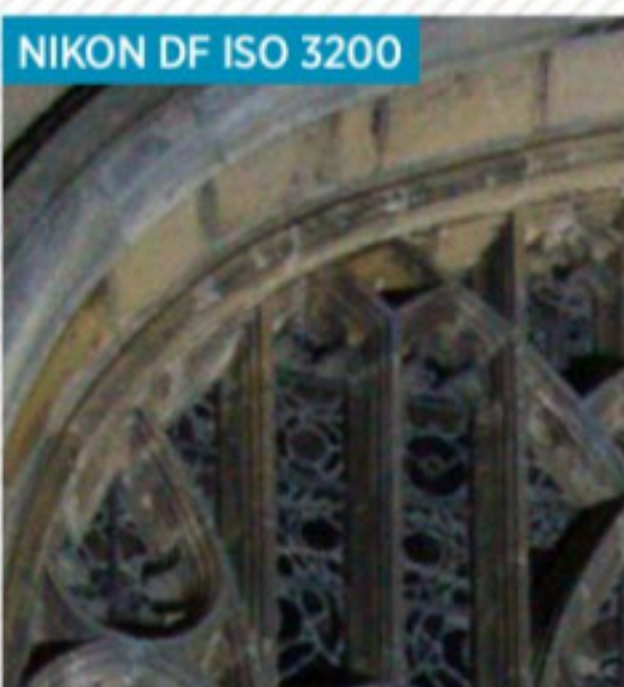
and low-light performance of the Df and D610. All comparison images were shot using the same 24-85mm f/3.5-4.5 lens and converted from Raw files in Adobe Lightroom V5.3 with default settings but no noise reduction.

### ISO COMPARISON

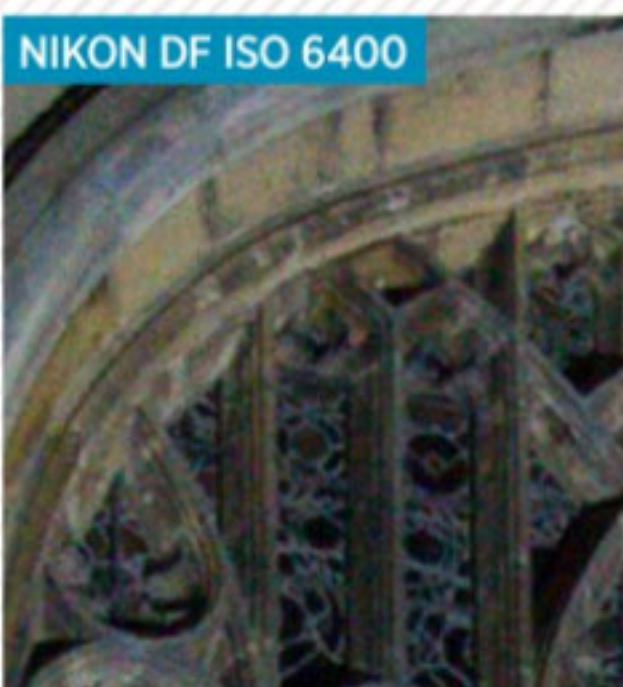
NIKON DF ISO 1600



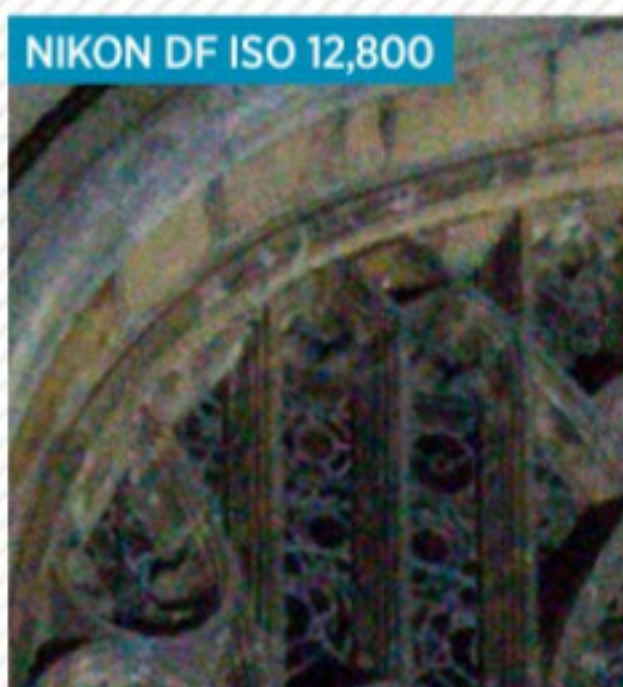
NIKON DF ISO 3200



NIKON DF ISO 6400



NIKON DF ISO 12,800



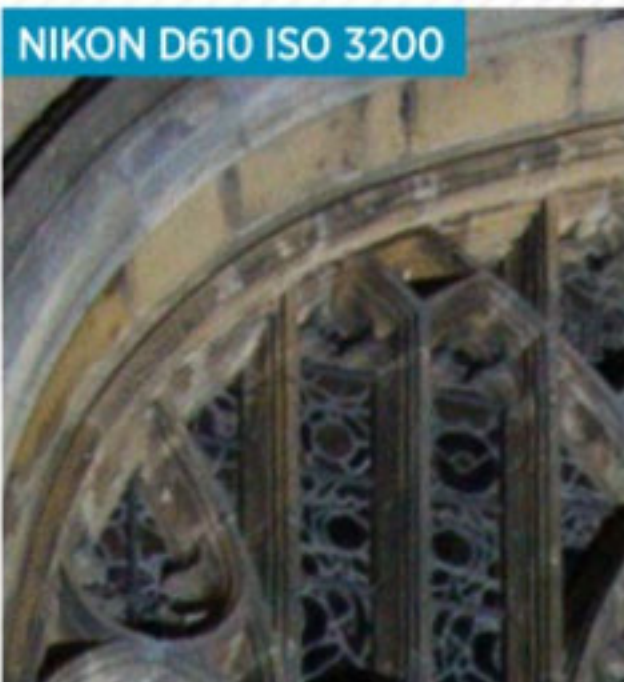
NIKON DF ISO 25,600



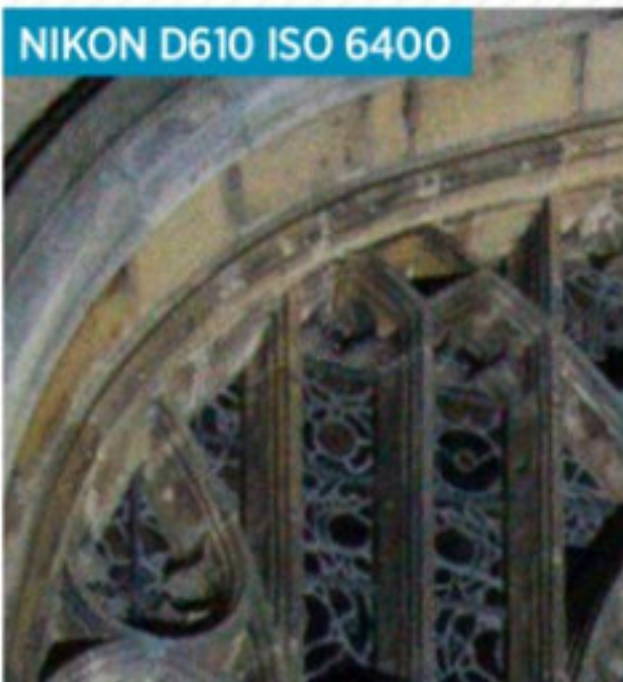
NIKON D610 ISO 1600



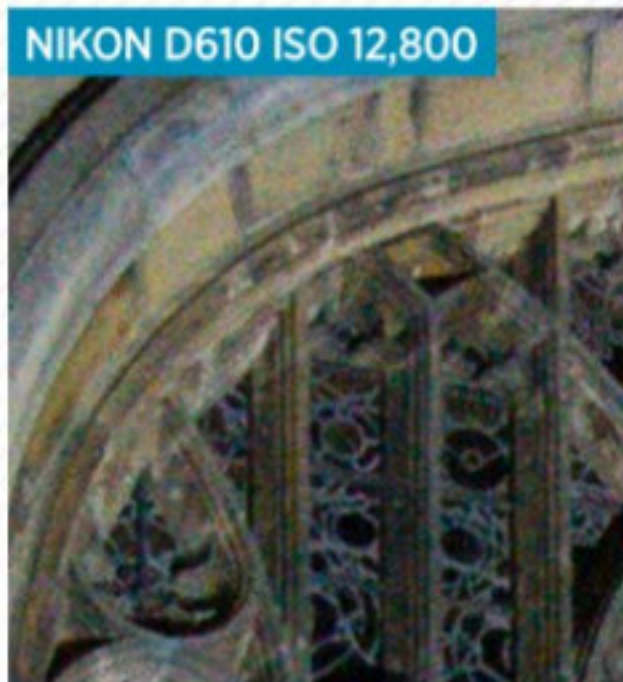
NIKON D610 ISO 3200



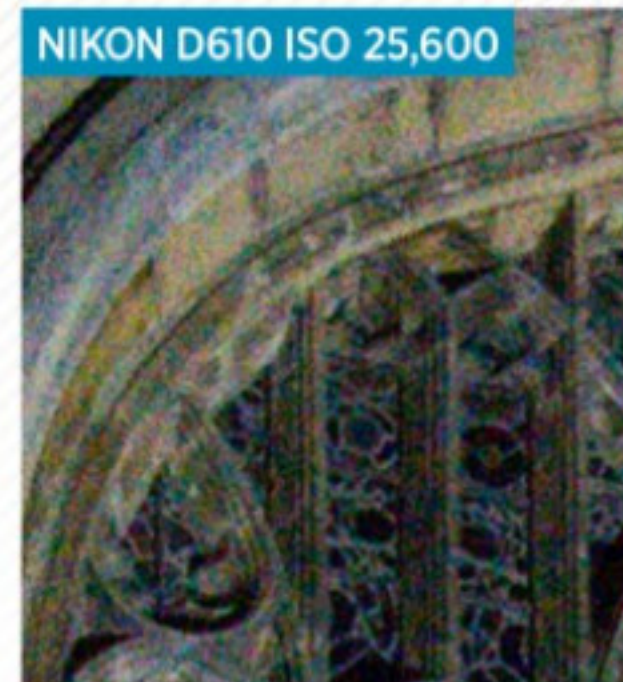
NIKON D610 ISO 6400



NIKON D610 ISO 12,800



NIKON D610 ISO 25,600

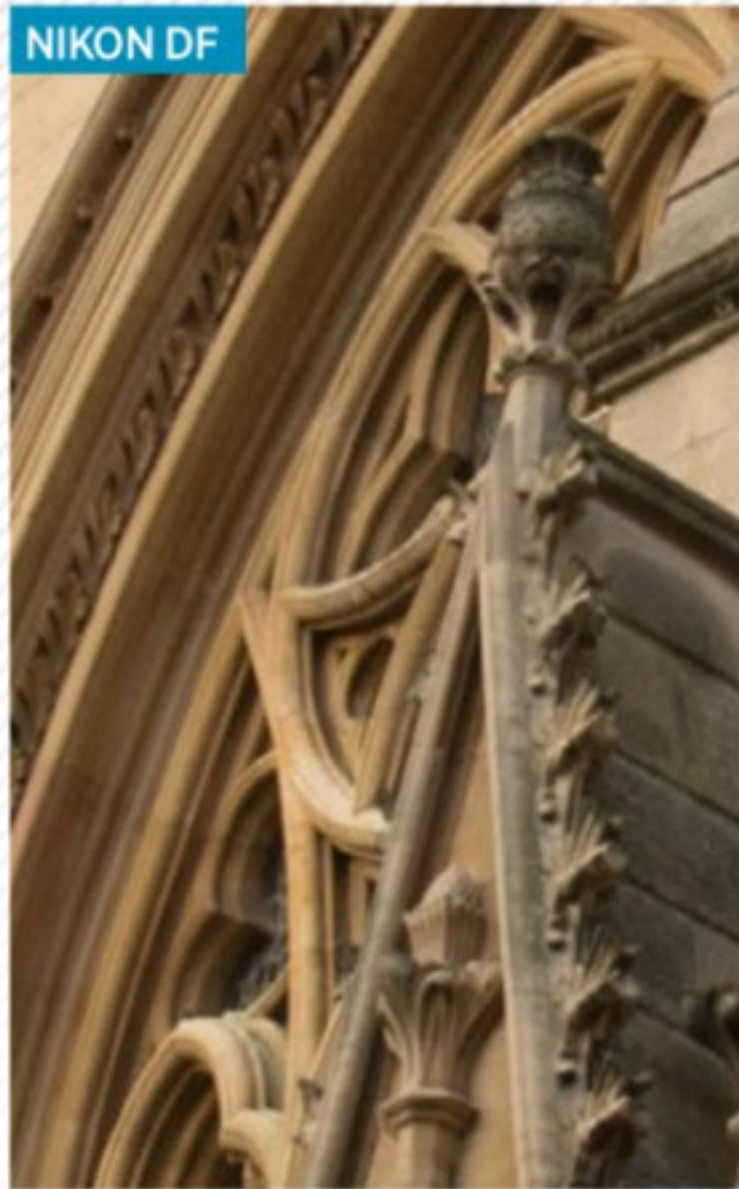


At the lower end of the sensitivity scale, there's very little between the Df and the D610 when it comes to controlling noise, and both are exceptionally good. When you reach ISO 1600 though, the Df starts to edge ahead – when images from the two cameras are viewed at the same size, the noise has less impact on the fine detail, and slightly more contrast is retained. At 1600 and 3200, this is still subtle, but it's when you push above this into the top levels that the difference becomes really noticeable. The top native settings differ by 1EV, yet deliver very similar performances; even then, images from the Df still have slightly more definition. This remains true as you push into the expanded settings, and, of course, while the D610 tops out at the equivalent of ISO 25,600, the Df goes on 3EV more to 204,800. In short, the Df offers significantly better performance in low light.

### RESOLUTION COMPARISON



NIKON DF



NIKON D610



The Df has two-thirds the number of pixels as the D610, which on the face of it means poorer resolution of detail by some distance. In practice, the difference isn't huge if you're not examining the finest details closely, but if you are then it's clear

that the higher-resolution sensor does have the advantage, with a fair amount more sharpness. There's also a practical difference when it comes to printing – the limit of prints from the Df at 300ppi is a little more than 16 inches along the longest

side, while you can go up to 20 inches with the D610. The advantage of the lower pixel count is smaller file sizes by a third – D610 Raw files are about 30MB, and Df Raws are around 20MB. This makes a noticeable difference in processing times.





## CONTINUOUS AF AND DRIVE MODE

With a top speed of 5.5 frames-per-second, the Df beats the D800, but is just short of the D610's six frames-per-second. This can of course be combined with continuous AF, and

we tried this by seeing how well it kept in focus a London bus coming towards the camera.

The Df had no problem at all maintaining focus, and each shot was perfectly sharp.

Shooting both Raw and JPEG files to class 10 SD cards, the speed was maintained for 21 shots before the camera paused – that's more than four seconds of continuous shooting.

## Active D-Lighting

Active D-Lighting can be applied to JPEGs either when recorded alone or shot alongside Raw images. It's designed to retain detail in the highlights and shadows in contrasty scenes, with six settings: auto, low, normal, high, extra high 1, extra high 2. Generally, the effect is subtle. In our images, the Extra High 2 setting had a particularly strong effect on the highlights.

ADL OFF



ADL AUTO



ADL LOW



ADL NORMAL



ADL HIGH



ADL EXTRA HIGH 1



ADL EXTRA HIGH 2







## HDR mode

Available when you're shooting JPEG files only, the HDR mode combines two exposures into one to increase the dynamic range in contrasty scenes. You can select an exposure difference of 1, 2 or 3EV, or

leave the camera to decide in auto. You can also change the level of smoothing, which basically controls how extreme the HDR effect is – the lower the smoothing setting, the more extreme the result. This doesn't go

so far as to produce surreal, over-processed results though, and any HDR setting gives a natural-looking final image, while the most extreme settings increase dynamic range dramatically.

SMOOTHING LOW – HDR AUTO



SMOOTHING LOW – HDR 1EV



SMOOTHING LOW – HDR 2EV



SMOOTHING LOW – HDR 3EV



SMOOTHING HIGH – HDR AUTO



SMOOTHING HIGH – HDR 1EV



SMOOTHING HIGH – HDR 2EV



SMOOTHING HIGH – HDR 3EV



## THE VERDICT

My heart says the Nikon Df is a fantastic camera, but if I was about to part with nearly £3000 for one, my head would probably have more to say.

There's no doubt that the Df's enjoyable to use, and the results are superb, especially in low light where it excels. But a long hard look at the camera reveals a series of small niggles – things like having only one SD slot in the bottom, using the focusing system of the cheaper D610 alongside the sensor and ISO capabilities of the D4, slight issues with fiddly dials. They each take the edge off slightly, and are even harder to overlook at such a high asking price.

I'd find it even harder to justify the price of the Df when there are two Nikon full-frame

options that are cheaper, the D610 and the D800. The D610 costs £1250 less, yet it has the same focusing system and processor, the sensor has a higher resolution, and you get video recording too.

Cold hard logic therefore seems to be against the Df – but after using it for a per, I'm not sure it's as simple as that and, while my head might have more to say, there's always the chance that my heart could shout loud enough to drown it out.



## HOW IT RATES

<b>FEATURES</b>	<b>23/25</b>
A unique mix	
<b>HANDLING</b>	<b>23/25</b>
Really enjoyable to use	
<b>PERFORMANCE</b>	<b>24/25</b>
Fantastic all round, especially in low light	
<b>VALUE FOR MONEY</b>	<b>21/25</b>
Two Nikon full-frame bodies are cheaper	
<b>OVERALL</b>	<b>91/100</b>
It's a fantastic camera, but the price is a sticking point.	
<b>PROS</b> Low-light performance, dial controls, compact and light	
<b>CONS</b> Price, one SD slot	



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# Df

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Using its large, metallic mechanical dials, with the Df, you'll rediscover a more direct connection with your camera. This is Nikon's smallest, lightest FX-format body, yet it delivers the same exceptional image quality as the D4 – from low to extremely high ISO. The Df represents a fusion between tactile precision mechanics and the exquisite image quality of the flagship

camera D4, stimulating artistic sensibilities and inspiring photographers to new levels of creativity beyond previous limitations of time, place and volume of available light. This is Nikon's proposal to passionate photographers: rediscover the fulfillment of measured, deliberate photography, and create your pictures one frame at a time.

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AF-S 50mm f/1.4G <b>£279.00</b>	AF-S 800mm f/5.6 FL VR <b>See web</b>	AF-S DX 55-300mm VR <b>£275.00</b>
AF-D 50mm f/1.8 <b>£112.00</b>	AF-S 10-24mm f/3.5-4.5G <b>£639.00</b>	AF-S 70-200mm f/2.8 VR II <b>£1,619.00</b>
AF-S 50mm f/1.8G <b>£149.00</b>	AF-S DX 12-24mm f/4 G <b>£839.00</b>	AF-S 70-200mm f/4.0 VR <b>£999.00</b>
AF-S 58mm f/1.4G New <b>See Web</b>	AF-S 14-24mm f/2.8G ED <b>£1,299.00</b>	AF-S 70-300mm IF ED VR <b>£419.00</b>
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24mm f/2.8 IS USM <b>£449.00</b>	400mm f/2.8L USM IS II <b>£8,279.00</b>	24-105mm f/4.0L IS USM <b>£839.00</b>
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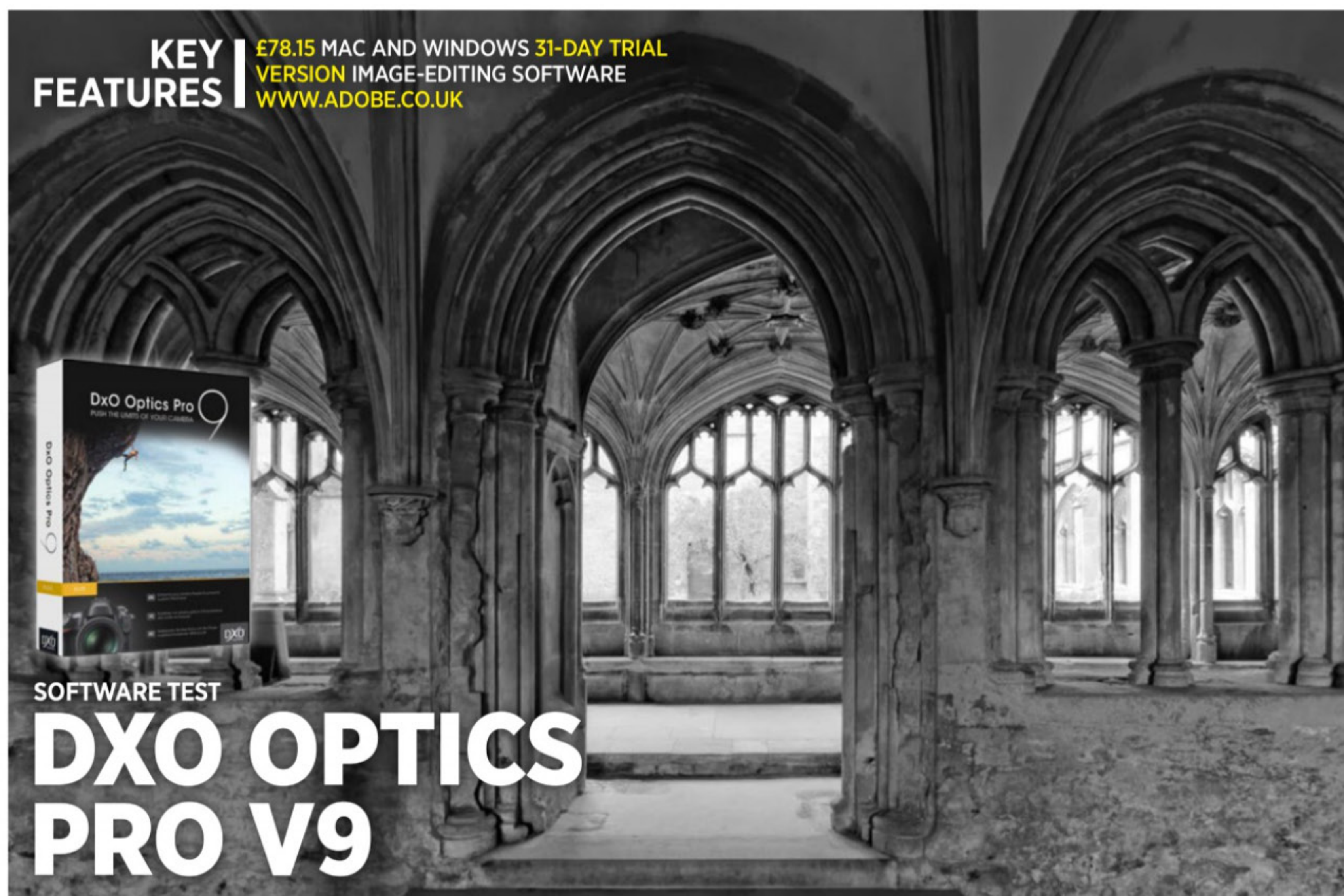
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*The latest version of DxO Optics Pro claims an unrivalled quality when it comes to automatically correcting distortion, vignetting, chromatic aberrations and lens softness. We put it through its paces*

WORDS & PICTURES ANDREW WILLIAMS

#### AT-A-GLANCE SPECS

**WEBSITE** [www.dxo.com](http://www.dxo.com)

**VERSION** 9.0.1

**PRICE** £119 Standard Edition, £239 Elite Edition; the licence covers two computers.

**FREE TRIAL** Fully functional 31-day demo

**COMPATIBILITY** Windows Vista 32 or 64 bit, Windows 7 32 or 64 bit, Windows 8 32 or 64 bit; Mac OS X 10.6 to 10.9

**SYSTEM REQUIREMENTS**

Windows minimum: Intel Core® 2 Duo, AMD Athlon™ 64 X2 or higher; 2GB RAM (8GB recommended); graphics card supporting DirectX 9.0c required. For OpenCL graphics acceleration. Nvidia GeForce GTX 460 or higher; 4-core processor machine strongly recommended

Mac Intel only, 64-bit compatible (Intel Core™ i5 or higher); 2GB RAM minimum (8GB recommended); 512MB video memory graphics card recommended to support GPU acceleration; 4-core processor machine strongly recommended

For many years I have considered DxO Optics Pro to be the class leader in correcting lens distortion with its vast database of lens and camera body combinations, each one individually tested. As the software has developed each version has added comprehensive editing tools, which whilst they can be used with JPEGs are particularly aimed at Raw format users.

As with much software, in the hands of a skilled user excellent results can be achieved; however the combination of a steep learning curve and time pressures can make editing a shoot a significant task. DxO, in common with other editing software, addresses this problem by providing automatic corrections requiring no user input. DxO differs from other software by combining its vast knowledge of the specific performance of lens and camera combinations to make more intelligent corrections to your image. In many cases these corrections are all that are needed and, if you are happy with the results, you can easily export the images to your hard disk, another program such as Photoshop or Flickr from either module.

With version 9 the workflow has been further simplified by the redesigned

interface to present just two main views. The Organize view gathers the images for processing whilst the Customize view is where you edit the image. Selecting an image in either view displays a preview of the image with specific corrections applied using DxO's understanding of the performance of your camera and lens, together with optimisation of the lighting and noise reduction. To save disk space lens and camera data, determined from the image's EXIF data, is only downloaded when required.

To keep the interface uncluttered the default view just shows the most used adjustments, however if you want to further refine your image, all the more advanced tools are available by opening their panels with a single click. There is also a range of 32 preset treatments for an instant fix. These range from black & white conversions through to single-shot HDR effects. If you are unsure about the effect of a control, context sensitive help is available by clicking the '?' symbol.

Noise reduction algorithms are very computer intensive and software designers have to make a trade between speed and image quality. With version 9 DxO provides





## Navigating around the interface

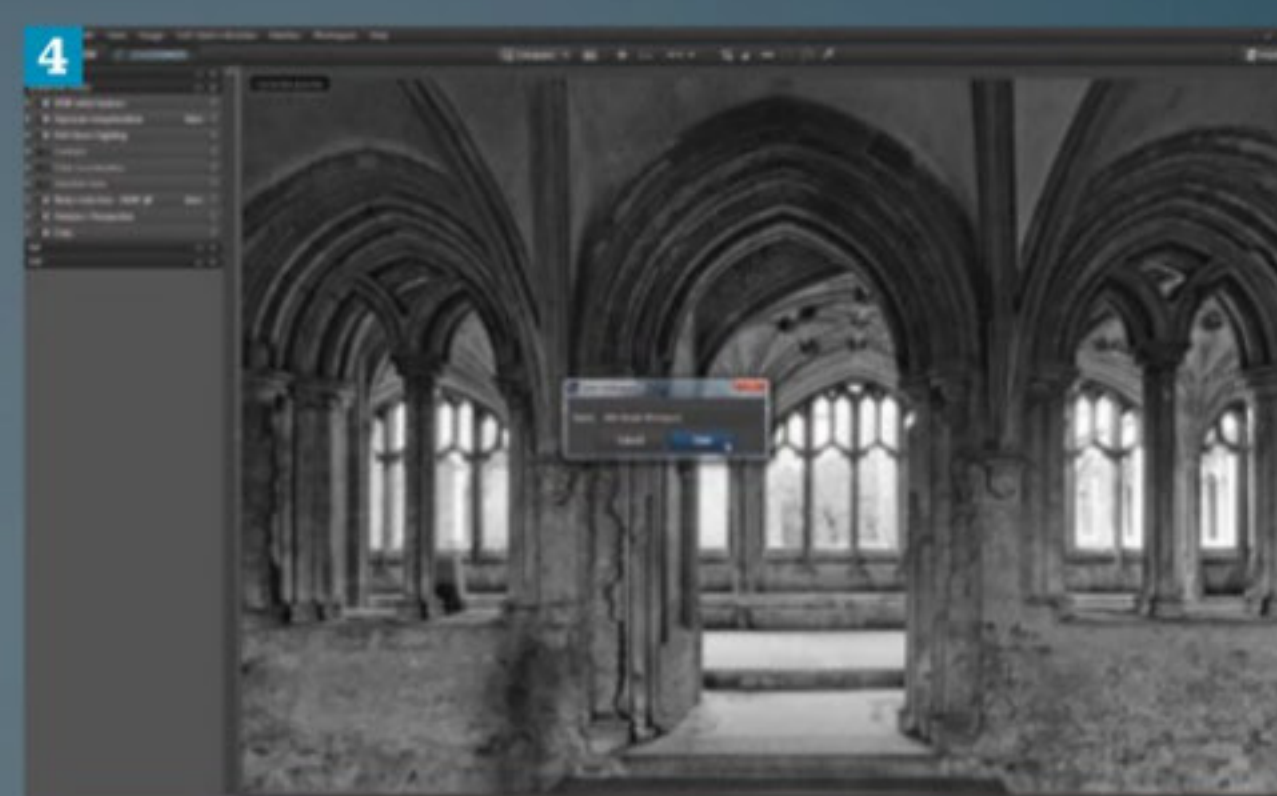
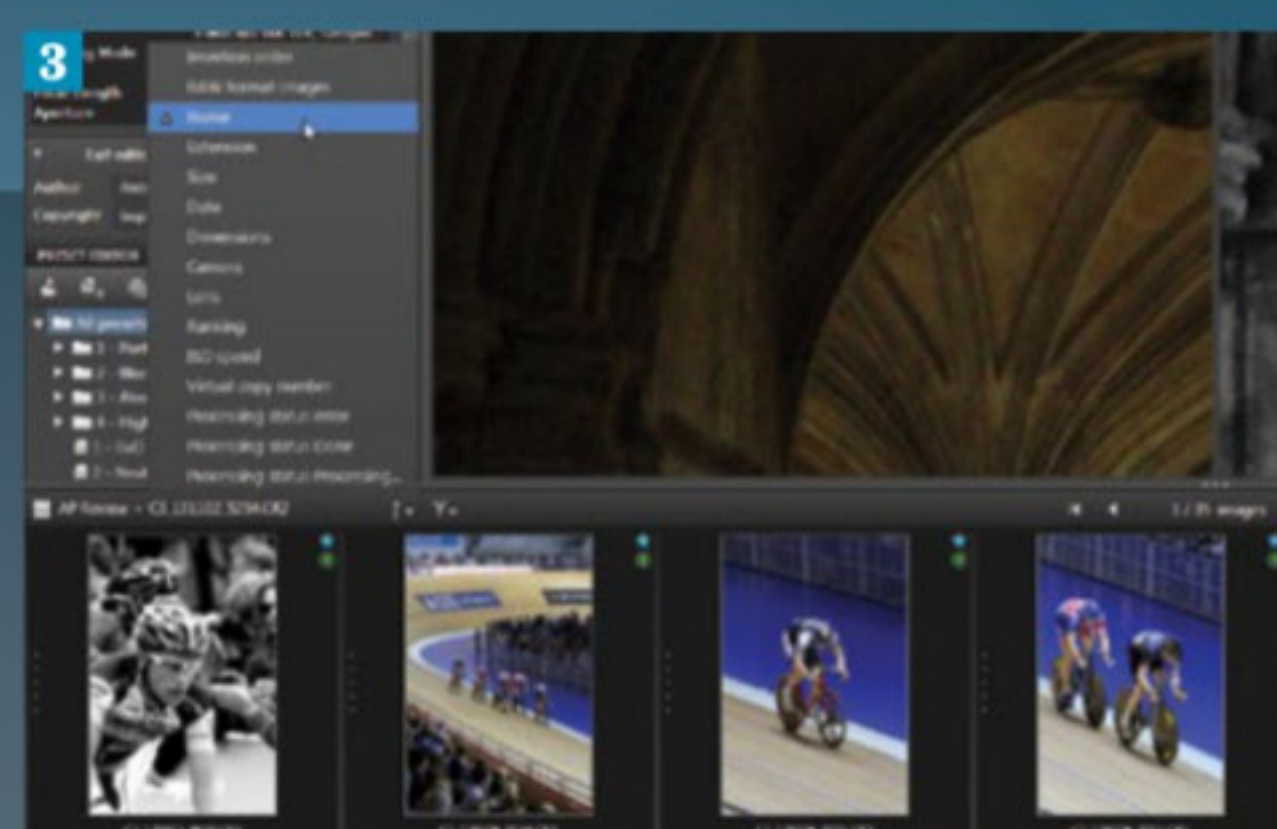
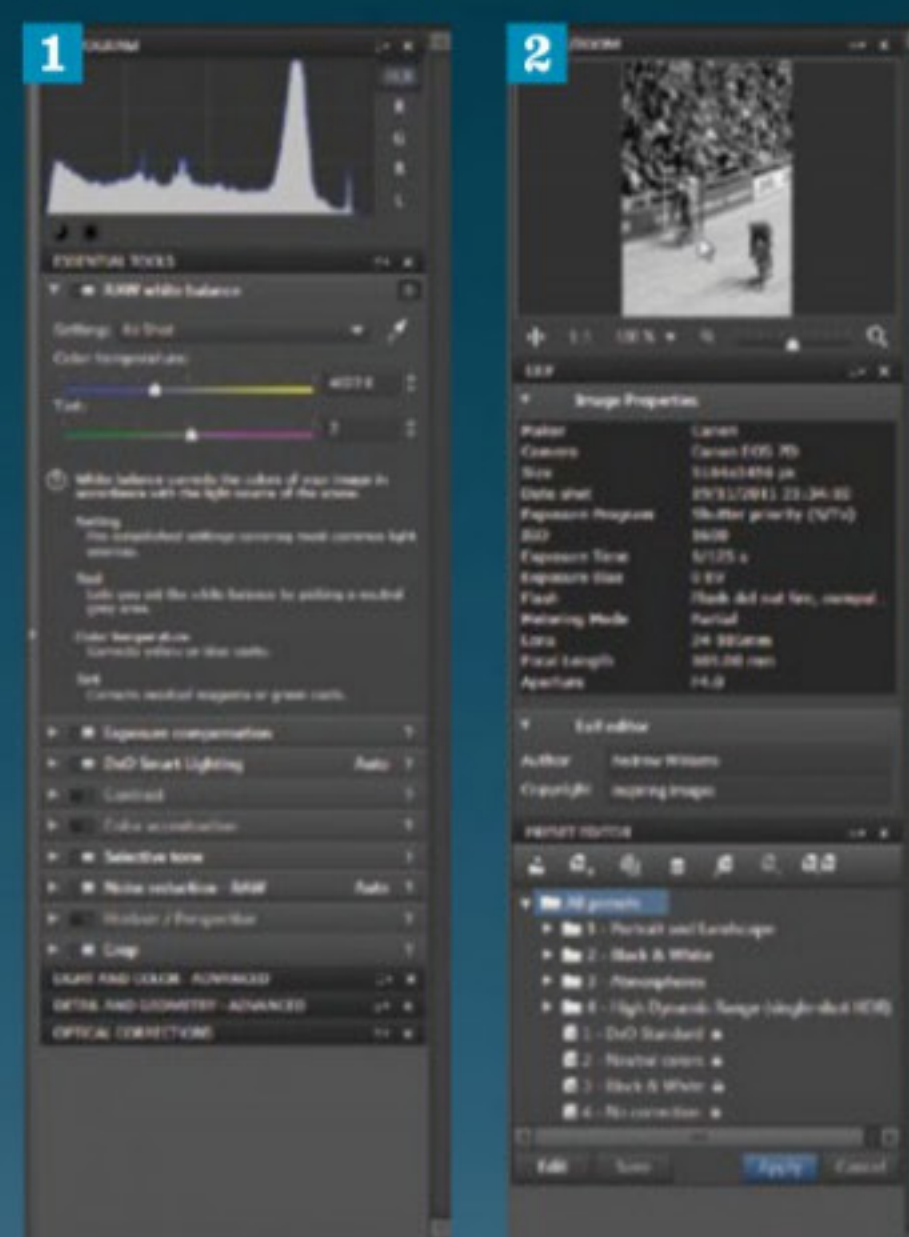
DxO v9 has a very straightforward interface design. The Organize screen can be set to display your file structure or you can collect images to work on together in a Project. Selecting an image in the filmstrip along the bottom shows a large preview of it with the automatic corrections applied. There's also a handy before/after view. The Customize view is where you work on your images. From either view you can apply preset looks from a drop-down list of thumbnail previews. In a change from previous versions, processing and export are available via a right-click menu from anywhere in DxO. Overall the interface is well laid out with the more complex tools only displayed on demand.

**1** DxO applies its default processing as soon as you preview the image in either view. The right-hand panel of the Customize view contains all the usual editing tools set out in palettes which can be revealed or hidden with a single mouse click on the title. By default the Essential Tools palette is open while the more advanced ones are hidden making for a clean interface but with the more complex tools only a single mouse click away. Tool sensitive pop-up help is displayed when you click the '?' icon.

**2** On the left side of the screen are three panels. The top one controls your viewpoint when zoomed in by dragging the small square around the preview window. The next displays the EXIF data

for the selected image. This is fixed data although you can edit the Author and Copyright fields. It would be useful to be able to edit more fields here such as the IPTC data fields used by image libraries. Finally there is a panel to manage presets and you can create your own too.

**3** Along the bottom is the Image Browser displaying thumbnails of your images. The contents are selected in the Organize view either from a folder on your hard drive or from a Project which you can create. The advantage of a Project is that it can display images from any location. The browser can be enlarged or hidden. If you use a second monitor you can display the browser as a thumbnail grid. The images can be sorted and/or filtered using a pop-up list.



**4** The whole workspace is easily modified and you can save your own choice and layout using Workspace>Save Workspace from the main menu. Here I've created my own panel (called AW) with some favourite tools and stacked a few selected panels on the left-hand side. I've also hidden the browser giving the maximum area to the image preview. Of course you can quickly switch back to the default workspace via the menu.

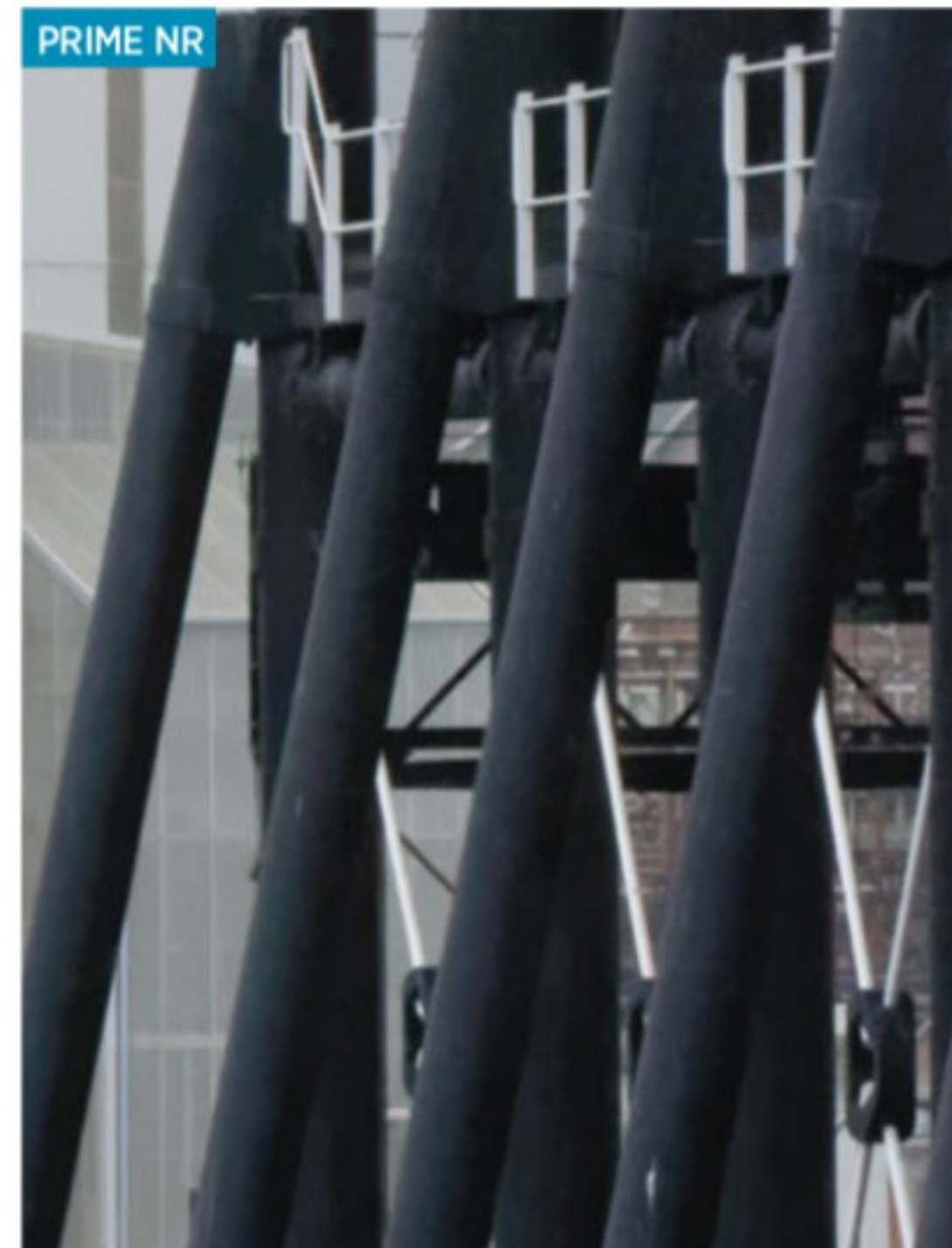
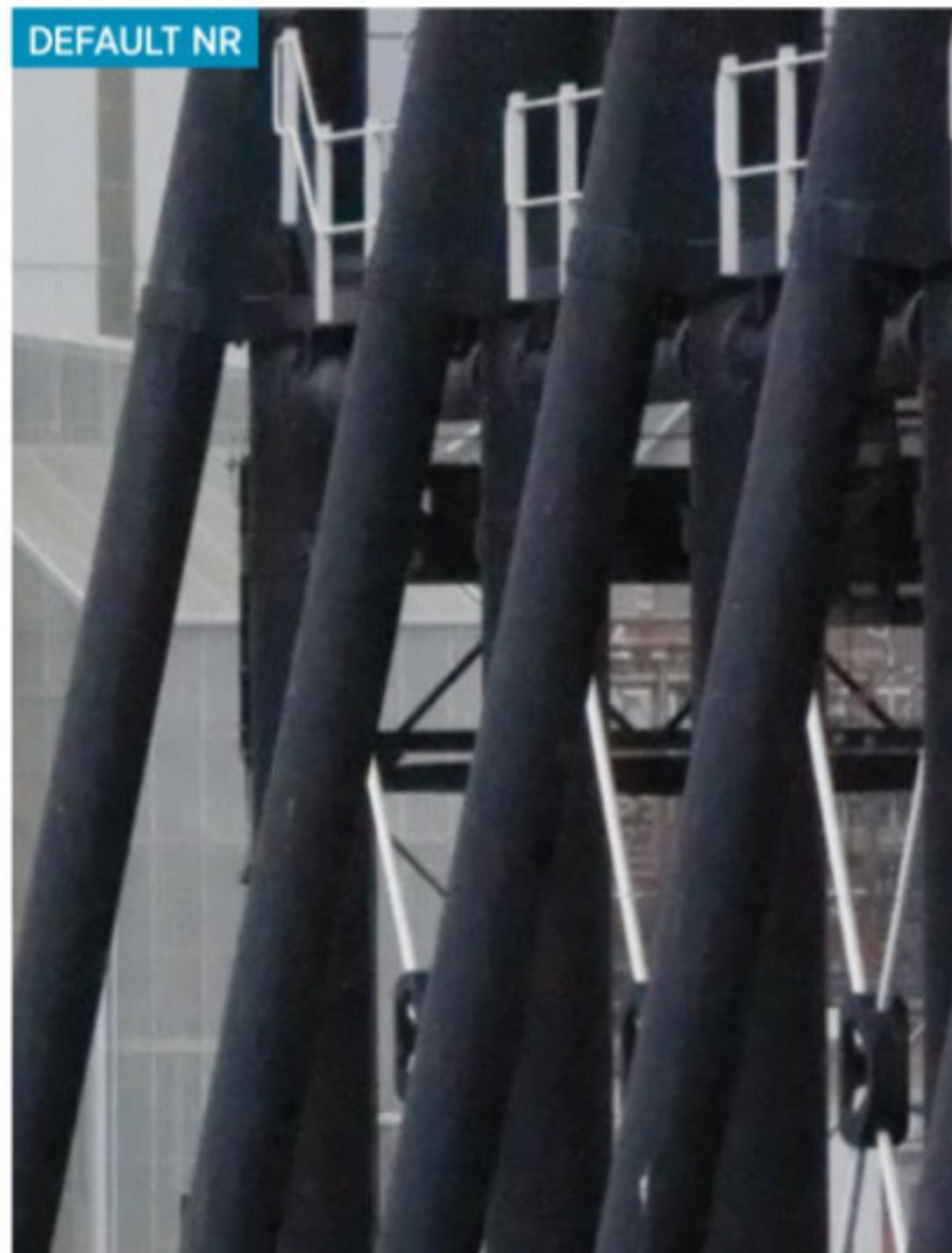
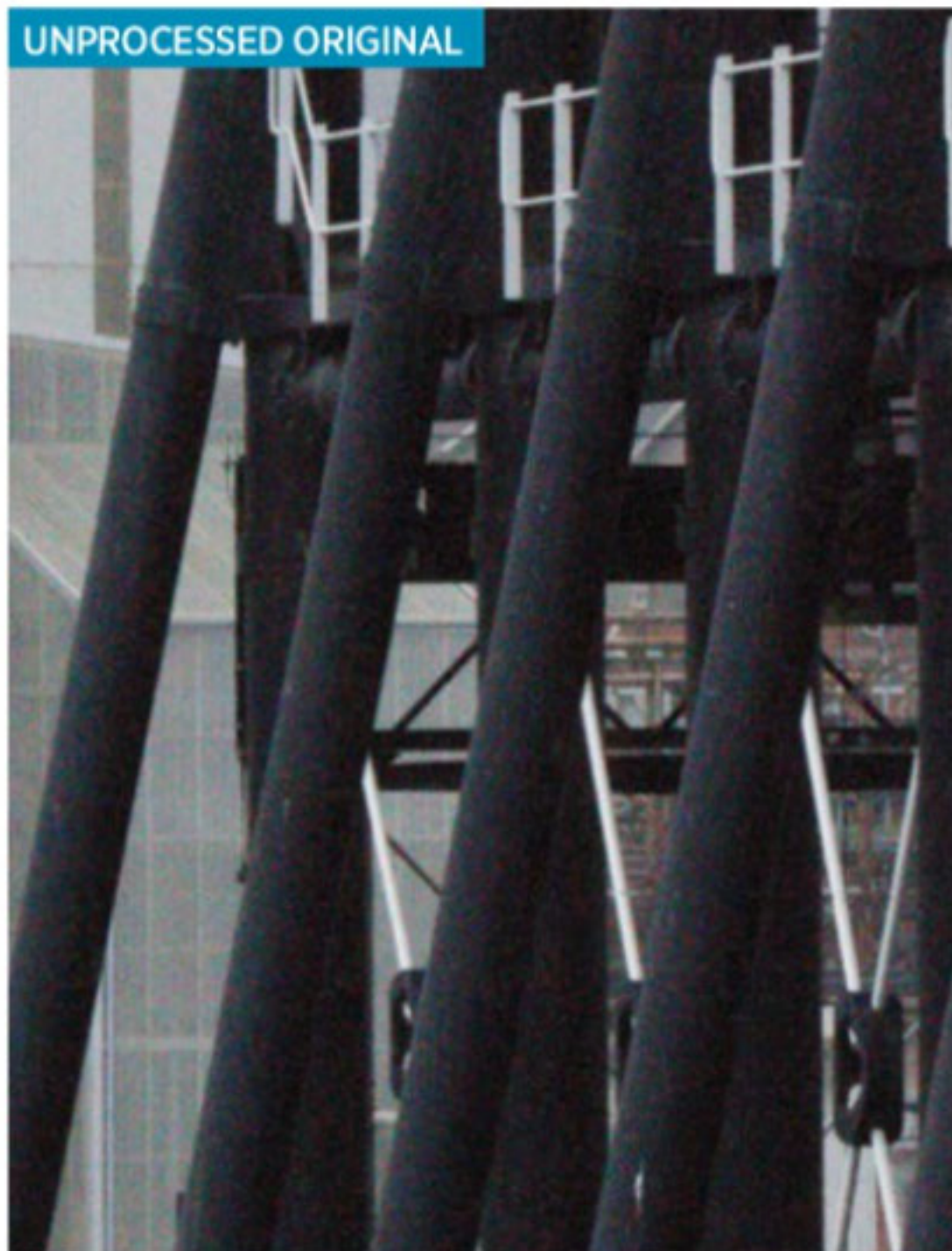
**“Noise reduction algorithms are very computer intensive and software designers have to make a trade between speed and image quality”**

you with a choice. You can use the default, faster noise reduction algorithm which has been improved over version 8 and provides good results, or you can select the new highest quality 'PRIME' algorithm which gives the best quality results but takes longer to process. Selecting the PRIME preview does cause a few seconds' delay in updating the preview but in practice this is acceptable. As the final processing takes place in the background, the effect of

the longer processing on your workflow is minimised, although it pays to be selective about which images benefit most from the highest quality option.

The improvements to DxO's automatic image processing together with the more streamlined workflow make it a great Raw processing and editing tool. The new PRIME noise reduction technology adds the ability to shoot at very high ISO values and still retain high image quality.





## NOISE REDUCTION

DxO version 9 introduces a choice of noise reduction techniques by adding the option to use the new PRIME processing when maximum quality is needed at the expense of processing time. As noise reduction is applied in the background during export,

you can continue working but using PRIME places a heavy load on your computer. An image which took eight seconds using standard NR took 125 seconds with PRIME. The results, however, are much better. This shot of the Anderton Boat Lift was taken

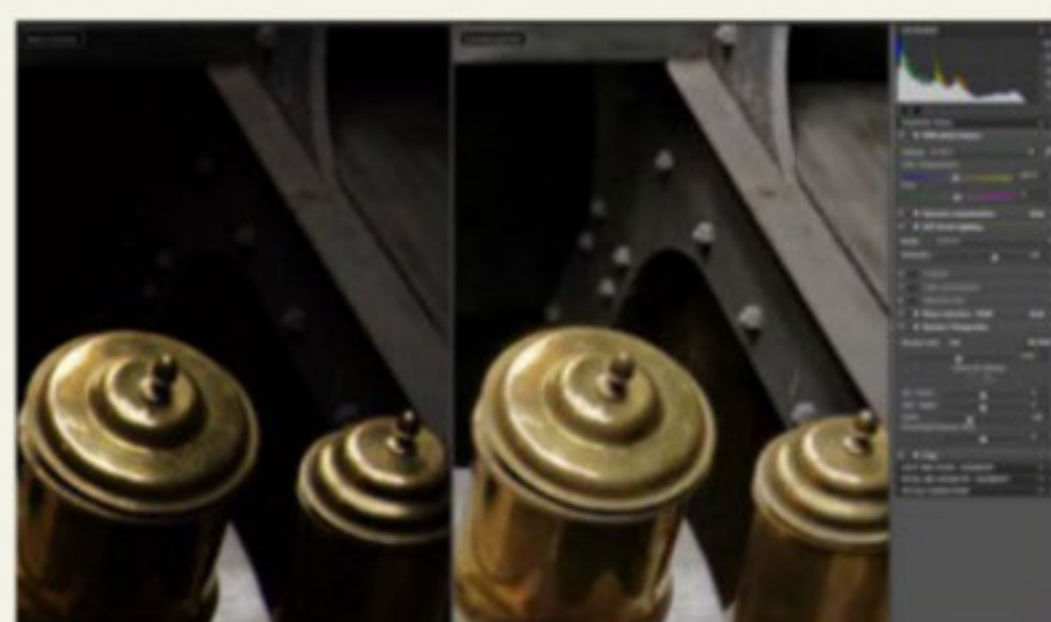
at ISO 12,800 and there is a lot of noise. Applying the default NR improves things considerably but still leaves the image looking quite grainy. By using the PRIME noise reduction, the grainy look disappears while the finer detail looks better defined.

## SMART LIGHTING

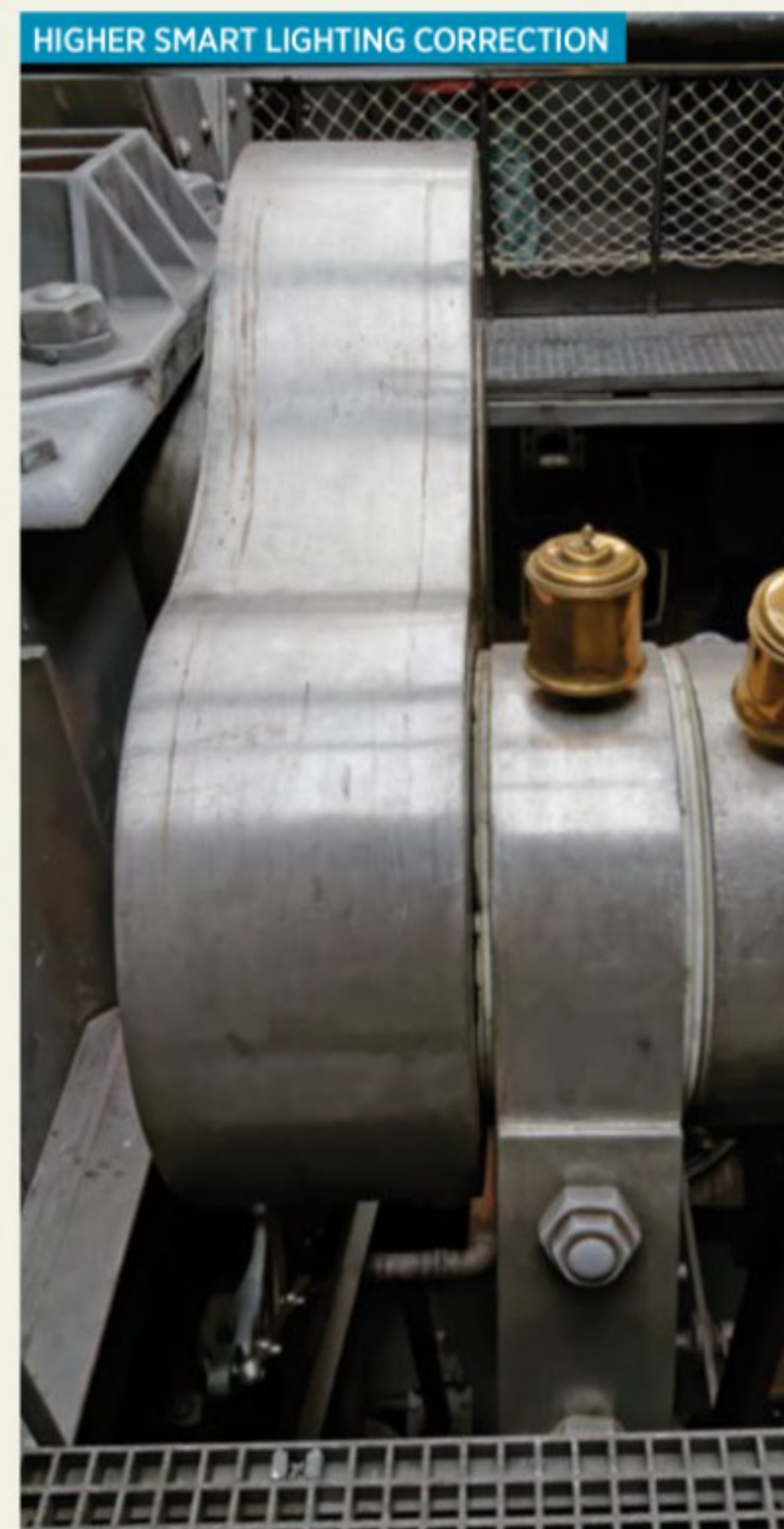
Smart Lighting aims to recover details from the shadow areas without affecting the highlight regions in your image. It is applied automatically as part of the default corrections DxO makes as it creates a preview image. The default setting is Slight but for more contrasty images you can change this using presets or a slider control.

In this image of the SS Great Britain's massive engine taken at ISO 1600, the shadow areas remain blocked in at the default Smart Lighting setting.

Manually adjusting the slider to a higher value has made a fine job of revealing more shadow detail but the highlights are only slightly affected. I also processed this image using the PRIME noise reduction which gave excellent results.



**ABOVE** DxO v9 has loads of great features to help you get the most from your Raw files. Minimising noise and controlling contrast are two highlights.

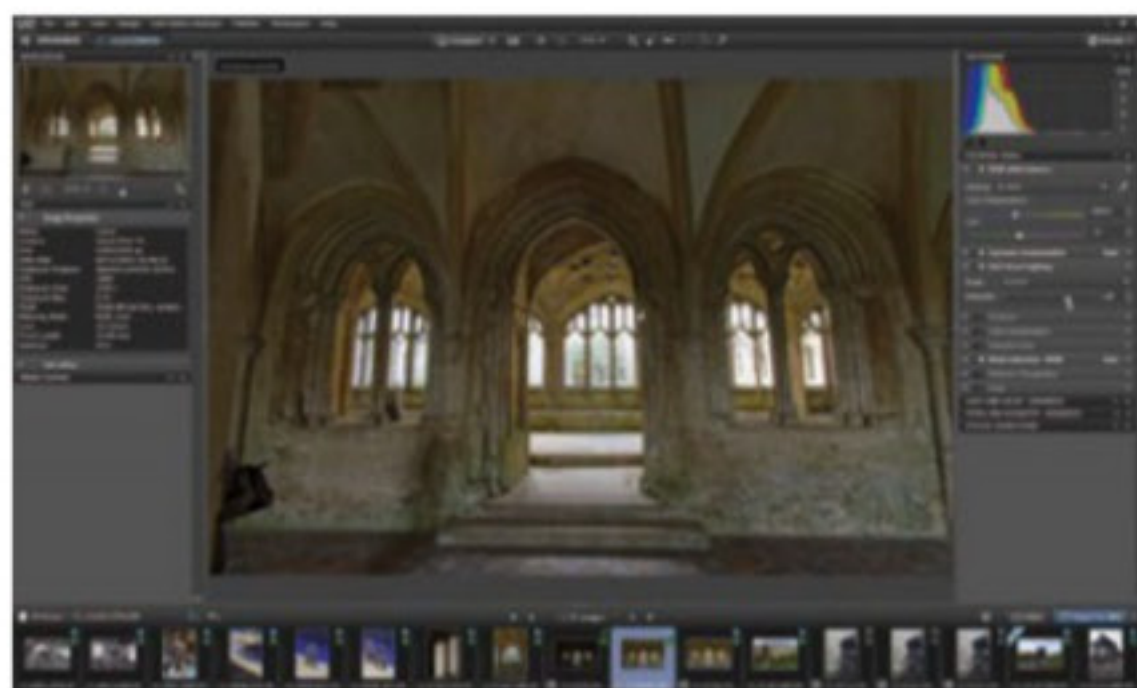




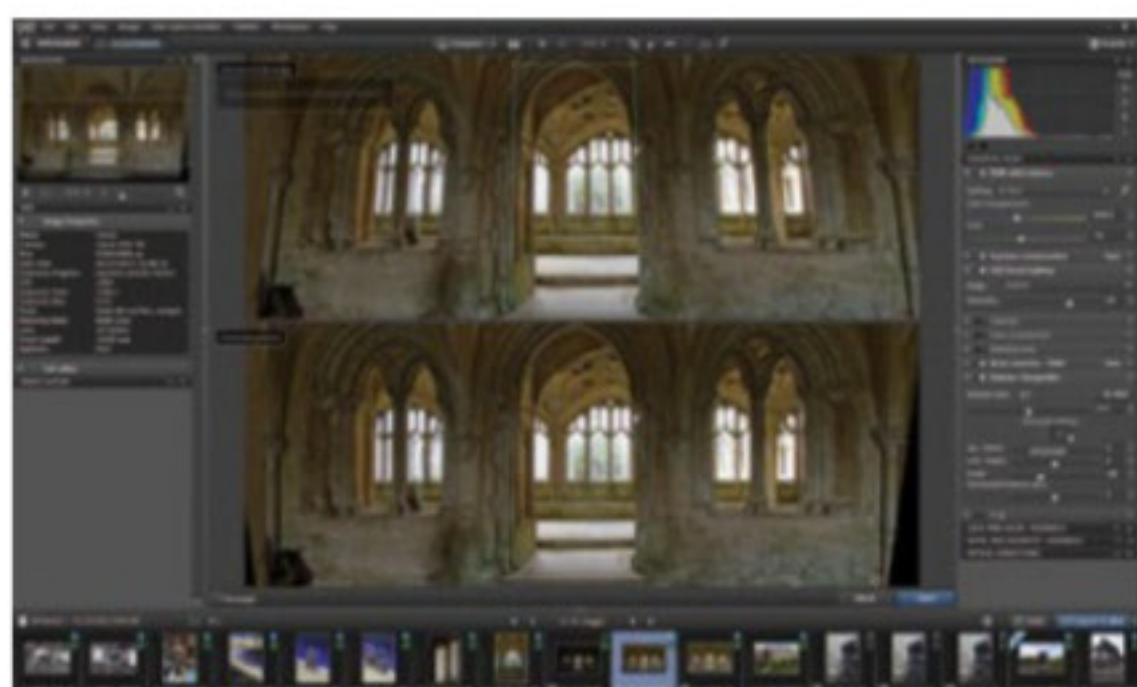


## STEP BY STEP

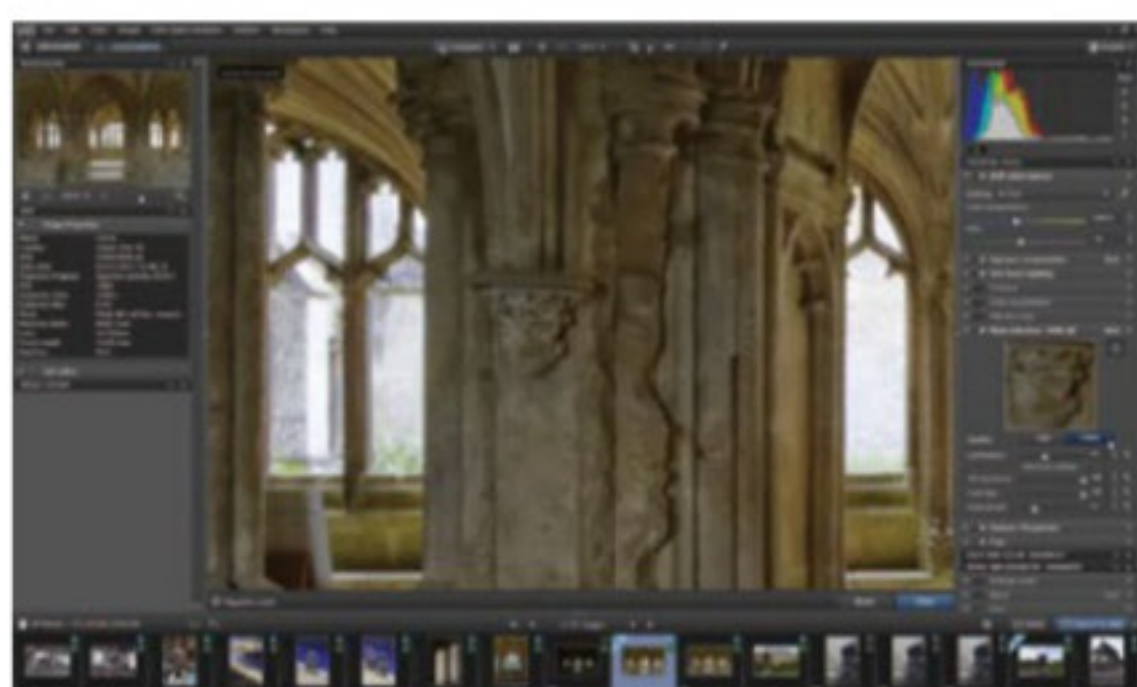
This shot was taken in difficult conditions on a visit to Lacock Abbey. Normally I would have spent some time setting up, bracketed and used my tripod, but this was a family trip, so my tripod was at home and time was limited. As a result I came away with one shot taken at ISO 1600, 1/40sec handheld. The camera struggled to expose for the bright lights in the windows and subsequently the foreground was underexposed. Normally this would be for the delete bin but I decided it would make a good test for DxO's Raw file processing.



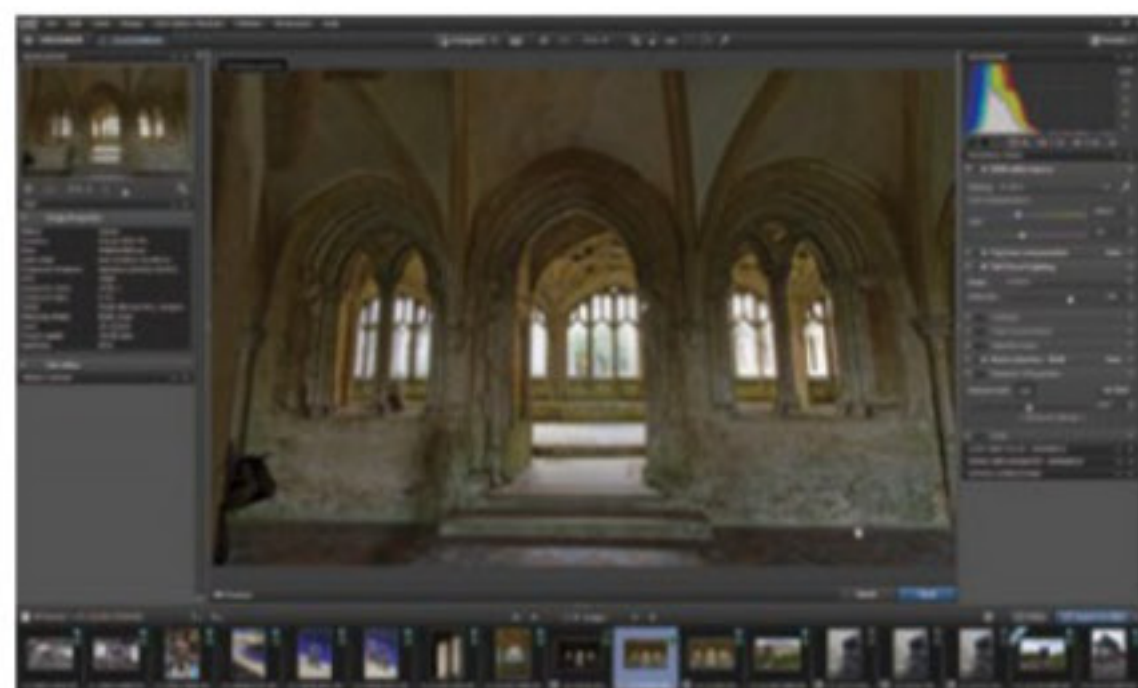
**1** DxO automatically applies corrections based on the camera and lens used. It also applies Smart Lighting at a default Low setting. This has improved things slightly but the foreground is still too dark. Adjusting the slider brightens the shadows without affecting the highlights.



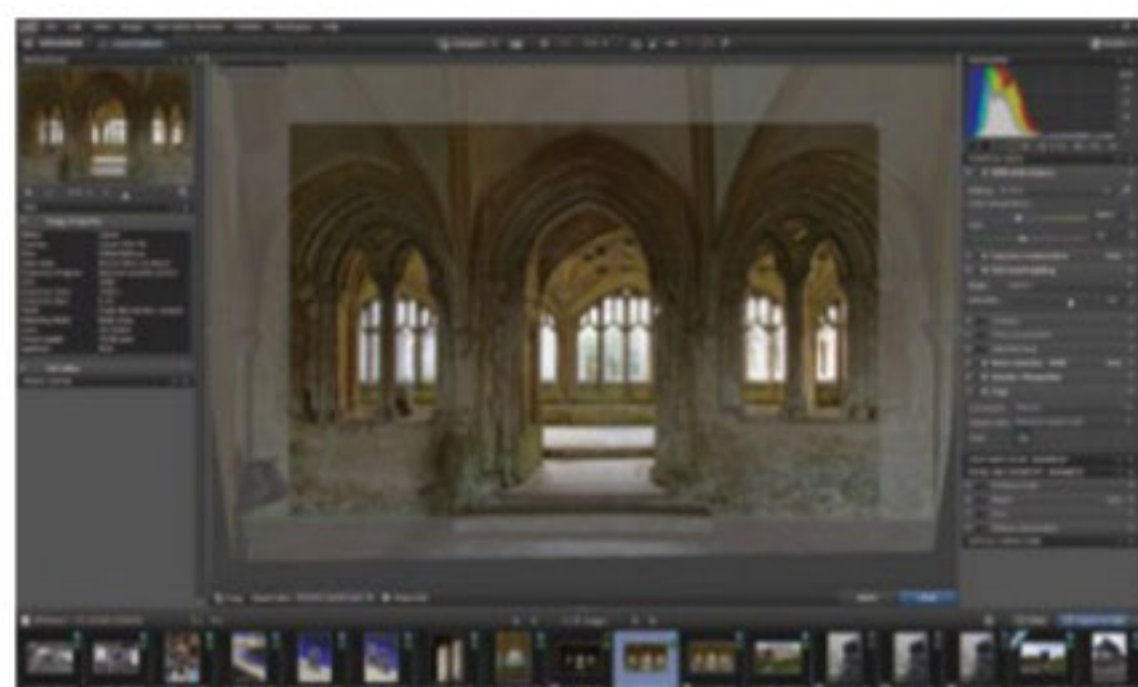
**3** I wasn't square to the subject and the camera was pointing slightly up so the doorway is distorted. Clicking the Advanced Settings button reveals the Rectangle Correction tool. Dragging the corners of the rectangle in the top image to match the door gives a preview in the bottom one.



**5** For the best results I want to use the PRIME noise reduction. You can't preview the results full screen but you can place a loupe on the image and gauge the results using the preview window. Using PRIME there is a refresh delay when moving the target, but this feels acceptable for the benefit.



**2** Now I can see that there are a few other issues. The image has converging verticals and someone's camera bag has crept in at the left side! Correcting the tilt is easy using the Horizon tool. Just select the tool and draw along the bottom of the wall and DxO rotates the image to suit.



**4** These adjustments have left some blank canvas and there's still that camera bag to get rid of. Selecting the Crop tool can automatically crop the blank areas but I need to drag a manual crop to remove the bag. DxO is a non-destructive editor; you can revisit the crop later if needed.



**6** Finally I decided to convert the image to monochrome. I could use a preset but this removes the geometric adjustments I've made so I used the Style - Toning tool and selected B&W. Then I adjusted the contrast by applying curves in the Red, Green and Blue channels to get the result.

## THE VERDICT

DxO Optics Pro version 9 introduces some useful new features and the revised interface displays all the commonly used tools and the rest are a couple of clicks away. Overall the workflow is very good and improved by adding direct export to other programs, Flickr and hard disk from anywhere in the software.

There are a few things which I would like to see added such as IPTC data fields editing of items like Rights Usage and GPS data which are becoming important. However the main thing I miss is the ability to make local adjustments. Tools like Smart Lighting make a very effective job of revealing shadow detail but sometimes I need to restrict changes to a small area. Maybe this is something for version 10?

The star of the show has to be PRIME noise reduction. For those high ISO images where top quality is required the extra processing time is well worth it and for the rest standard NR is still very good.

DxO continues to be priced according to the camera body you use. There is no other difference between the two versions apart from the extra £120, so that could be a deal breaker if you own a top-end Canon or Nikon.

## HOW IT RATES

### FEATURES **22/25**

DxO is a well-featured image processing solution.

### HANDLING **21/25**

The new interface is well laid out and the two main panels simplifies the workflow.

### PERFORMANCE **22/25**

The large previews appear very rapidly but it pays to have a fast processor, graphics card and plenty of memory.

### VALUE FOR MONEY **22/25**

If your camera is covered by the Standard version DxO is well priced at £119. However for photographers using higher end cameras the extra cost of the Elite version is harder to justify.

### OVERALL **87/100**

DxO version 9 features state-of-the-art optical corrections and noise reduction which compete favourably with other workflow solutions. The interface is easy to use and for more advanced controls are easily available.

**PROS** Easy to use with most of the editing features you need

**CONS** The price premium for higher end camera bodies seems a lot. Lacks keywording





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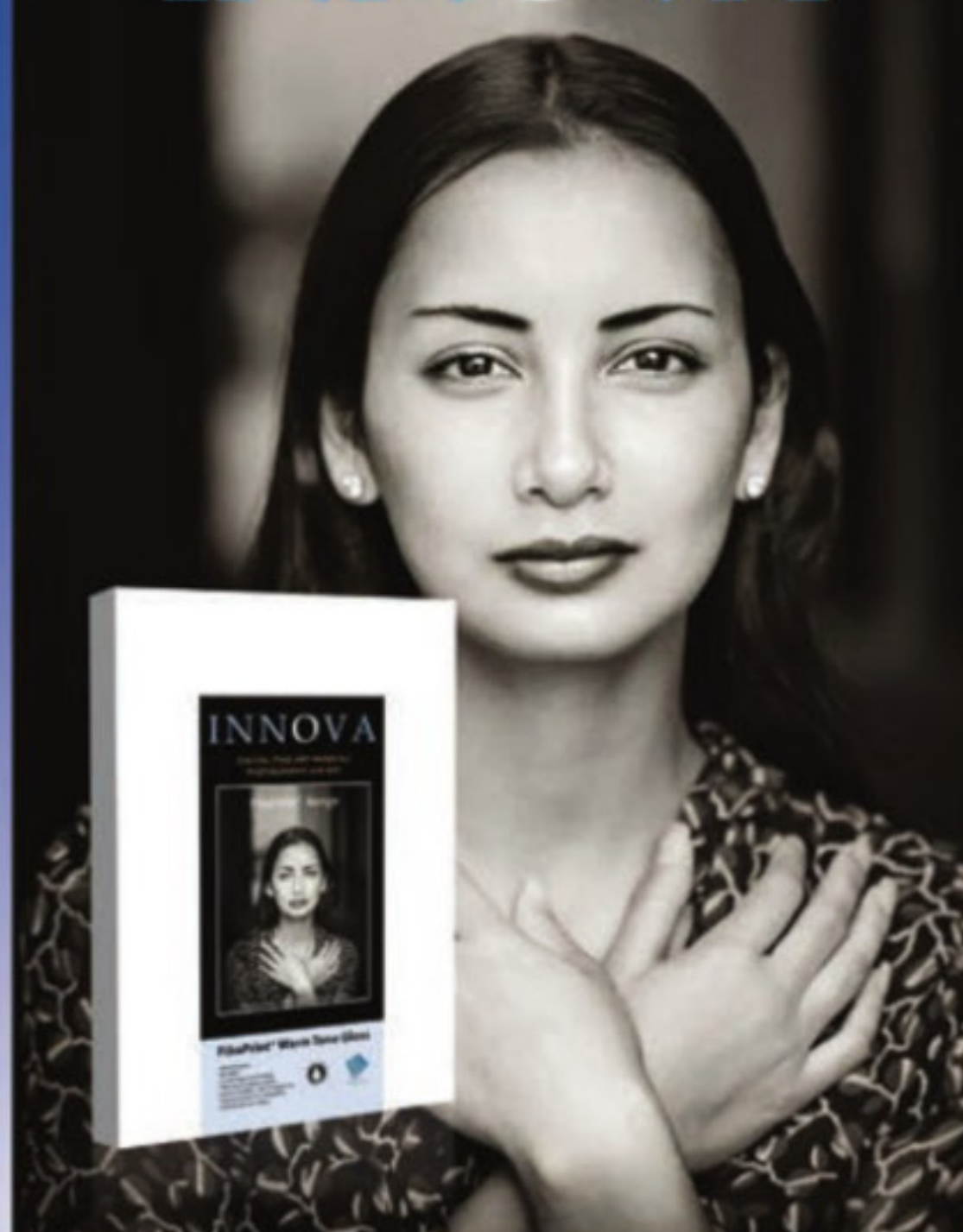


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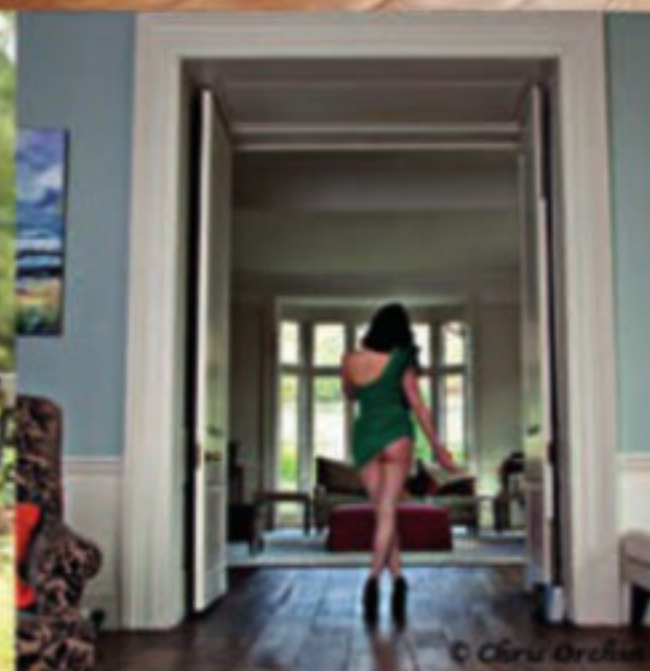
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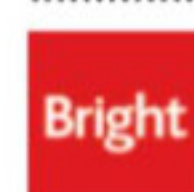
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